Curcumin is a potent, highly bioavailable curcuminoid formulation. This product contains a unique combination of three bioactive, health-promoting curcuminoids: curcumin, bisdemethoxycurcumin, and demethoxycurcumin, along with turmeric oil. The three curcuminoids are the strongest, most protective and best researched curcuminoids from the turmeric root. Naturally occurring turmeric root powder contains only 5-7% curcumin, while the blend in Curcumin-Evail™ contains 22.5% curcumin.

Research shows curcumin helps support a healthy inflammatory response. It was shown to reduce both acute and chronic inflammation, inhibits cyclooxygenase-2 expression and prostaglandin production, and inhibits the formation of thromboxane A2, thereby reducing platelet aggregation. It is a potent inhibitor of tumor necrosis factor (TNF)-alpha and reduces interleukin-6 and interleukin-1beta levels. It also has anti-oxidant and anti-cancer properties, inhibits prostaglandin synthesis, and exhibits anti-inflammatory activity.

Curcumin acts on the mother compound NF-kappaB by inhibiting its phosphorylation, which is a key step in the inflammatory cascade. It also inhibits the activity of cyclooxygenase-2 and reduces the production of prostaglandins, which are key mediators of inflammation. In addition, curcumin has been shown to increase the activity of the transcription factor Nrf2, which regulates the production of detoxification enzymes.

Excessive inflammation is a common risk factor for disease occurrence and progression. Inflammation may lead to joint pain and stiffness, arthritis, and other chronic health issues. Curcumin offers a natural solution to this problem by providing anti-inflammatory support. It is a powerful anti-inflammatory agent that has been shown to help reduce inflammation and pain associated with conditions such as arthritis, osteoarthritis, and chronic inflammatory diseases.

Curcumin, like aspirin, it does not inhibit the arterial protective factor prostacyclin. Curcumin acts on the mother compound NF-kappaB by inhibiting its phosphorylation, which is a key step in the inflammatory cascade.

THE INFORMATION PROVIDED FOR USE OF PHYSICIANS AND OTHER LICENSED HEALTH CARE PRACTITIONERS TO USE AS A BASIS FOR DETERMINING WHETHER OR NOT TO RECOMMEND THESE PRODUCTS TO THEIR PATIENTS AND MEDICAL AND SCIENTIFIC INFORMATION IS NOT FOR USE BY CONSUMERS. THE DIETARY SUPPLEMENT PRODUCTS OFFERED BY DESIGNS FOR HEALTH ARE NOT INTENDED FOR USE BY CONSUMERS AS A MEANS TO CURE, TREAT, PREVENT, Diagnose, or MITIGATE ANY DISEASE ON OTHER MEDICAL CONDITIONS.
Curcumin has an advantage over pharmacological anti-inflammatory agents because it is a powerful antioxidant, so it can also reduce COX expression along with being a COX 1 and COX 2 inhibitor. Where NSAIDs are known to have potential GI side effects such as GI bleeding, one study showed that curcumin was able to heal GI injury caused by the NSAID indomethacin.4 Amazingly, curcumin and resveratrol have been proven to be even stronger anti-inflammatory than ibuprofen and aspirin.7

**Allergies and Histamine Release**

Curcumin has been shown to decrease histamine release, suggesting that it plays a significant role in exerting both antioxidative and anti-allergic activities.2 Research shows that curcumin’s potential beneficial effect on the allergic response works by inhibiting the production of cytokines affecting eosinophil function and IgE synthesis.10

**Autoimmune Conditions**

Curcumin downregulates mediators characteristic of rheumatoid arthritis,13 reduces disease activity in Crohn’s14 and was shown to reduce disease activity in a model of multiple sclerosis in animals.20

*These findings highlight the fact that curcumin inhibits experimental encephalomyelitis by blocking IL-12 signaling in T cells and suggest its use in the treatment of MS and other Th1 cell-mediated inflammatory diseases.*24

By boosting NK cell activity increase,4 curcumin may also enhance the body’s ability to fight infections.

**Additional Research**

There are many studies on curcumin and cancer. For patients undergoing chemotherapy, curcumin does not need to be avoided as it has been shown to enhance chemotherapy effectiveness.33 Curcumin was the highlight of human clinical trials performed at the M.D. Anderson Cancer Institute in Houston, Texas.

*In addition to antioxidation, curcumin could also induce apoptosis by targeting mitochondria, affecting p53-related signaling and blocking NF-κappaB activation. To further dissect its anticarcinogenic mechanisms, a number of curcumin targets were identified. These included the aryl hydrocarbon receptor, cytochrome P450, glutathione S-transferase, serine/threonine kinases, transcription factors, cyclooxygenase, ornithine decarboxylase, nitric oxide synthase, matrix metalloproteinases and tyrosine kinases.*34

Many spices protect the body from bacteria and parasites in food, while boosting the body’s antioxidative abilities. Research shows curcumin to have antimicrobial activities. Curcumin was shown to reduce transcription of Epstein Barr virus and HIV virus.6,7 Curcumin may work to inhibit the growth of Staphylococcus aureus, Staphylococcus albus, and Bacillus typhosus, and is also effective against nematode parasites and certain protozoa.8

**GI Protection**

Curcumin may benefit ulcer, proctitis (inflammation of the rectum common in ulcerative colitis and Crohn’s disease) and may reduce leaky gut syndrome.

“We conclude that antiulcer activity of curcumin is primarily attributed to matrix metalloproteinases -9 inhibition, one of the major pathways of ulcer healing.”4 A pure curcumin preparation was administered in an open label study to five patients with ulcerative proctitis and five with Crohn’s disease. All proctitis patients improved, with reductions in concomitant medications in four, and four of five Crohn’s disease patients had lowered CDAI scores and sedimentation rates.”13

**Cardiovascular Protection**

Curcumin may lower total cholesterol, fibrinogen and platelet aggregation, while increasing HDL and decreasing lipid peroxidation.50, 52, 41

In one study, “The effect of curcumin administration in reducing the serum levels of cholesterol and lipid peroxides was studied in ten healthy human volunteers, receiving 500 mg of curcumin per day for 7 days. A significant decrease in the level of serum lipid peroxides (33%), increase in HDL Cholesterol (29%), and a decrease in total serum cholesterol (11.63%) were noted.”44 According to another study, “Our reviewed data show that, in human healthy subjects, the daily intake of 200 mg of the above extract results in a decrease in total blood lipid peroxides as well as in HDL and LDL-lipid peroxidation. This anti-atherogenic effect was accompanied by a curcumin antioxidant-induced normalization of the plasma levels of fibrinogen and of the apo B/apo A ratio, that may also decrease the cardiovascular risk.”45

**Brain Protection**

Curcumin pretreatment reduced brain damage following ischemia/stroke35 and from heavy alcohol intake.33 Curcumin reduced development and severity of Alzheimer’s disease in animal models by reducing plaque aggregation and plaque induced oxidative stress and was even capable of dissociating existing plaque.36 Its chelating ability for iron and copper ions is also believed to play a beneficial role in reducing the progression of the disease.27

*Initially, we reported the impact of non-steroidal anti-inflammatory drugs (NSAIDs), notably ibuprofen, which reduced arachidonic acid accumulation, but suppressed few inflammatory markers and without reducing oxidative damage. Safety concerns with chronic NSAID use led to a screen of alternative NSAIDs and identification of the phenolic anti-inflammatory/anti-oxidant compound curcumin, the yellow pigment in turmeric that we found induced multiple AD pathogenic cascades. The dietary omega-3 fatty acid, docosahexaenoic acid (DHA), also limited arachidonic acid damage and synthetic and cognitive deficits in a transgenic mouse model. Both DHA and curcumin have favorable safety profiles, epidemiology and efficacy, and may exert general anti-aging benefits (anti-cancer and cardioprotective).*36

**Liver Protection**

Curcumin pretreatment was shown to reduce the liver damage induced by alcohol39 and aflatoxin50 (the fungal toxin often found along with peanuts/peanut butter).