

# INFLAMA-REST™



## Natural COX-2 Inhibitor for Joint Comfort

**I**t happens. You reach for something and feel a sudden discomfort. Your joints and muscles may feel tender from overuse. Inside, your cellular systems are out of alignment, resulting in lessened mobility.

Source Naturals understands how difficult joint discomfort can be. We are deeply committed to developing well-researched formulas that address the root causes of joint distress. Our Bio-Aligned Formulas™ bring alignment to multiple interdependent body systems. Only this type of in-depth formulation can provide the long-term relief you are looking for.

Regain your comfort with Source Naturals INFLAMA-REST. Unlike many products that contain just a few ingredients to offer temporary relief, INFLAMA-REST is a Bio-Aligned Formula, scientifically designed to address aches. INFLAMA-REST goes deep to the underlying causes of joint discomfort. These systems include: inhibition of pathways involved in joint discomfort, joint and muscle function, DNA protection and antioxidant defense.



*Strategies for Wellness*™

## Nourish Healthy Joints

Discomfort can come from many places. From your head to your toes, many tissues can become uncomfortable from everyday use.

### Addressing Joint Comfort on a Deep Cellular Level

Joint discomfort starts when stress, such as tissue damage, causes an imbalance of the biochemical pathways on a deep cellular level. The body has its own “innate intelligence” encompassing more than just the thoughts in the brain. It consists of ongoing and complex chemical reactions regulated by a wide variety of enzymes and chemical messengers. These reactions can sometimes get out of balance – but you can control and inhibit key body chemicals that would otherwise lead to cellular irritation. For example, certain types of prostaglandins that regulate normal physiological functions such as blood flow, are maintained at low levels in all our cells under everyday conditions. In response to stress, a message is sent to the outer membranes of certain cells to convert their fatty acids into arachidonic acid, the raw material for prostaglandins. This stress also directs cells to produce Cyclooxygenase enzyme-2 or COX-2. This enzyme converts arachidonic acid into Prostaglandin E2, a particular type of prostaglandin specifically responsible for irritation on a cellular level. The result: joint discomfort.

But that doesn't have to happen. By supporting inhibition of the culprit COX-2, you can decrease Prostaglandin E2 production to bring your joint tissues back into a healthy and comfortable balance.

### Support COX-2 Inhibition

INFLAMA-REST includes herbs that support inhibition of COX-2 in a variety of pathways. Ginger, turmeric, green tea, holy basil, and Humulex™ hops extract all support direct COX-2 inhibition. But there are other places in our biochemical communication system where COX-2 production can be inhibited.

Two additional factors that lead to COX-2 production are nitric oxide and the enzyme that

produces it, nitric oxide synthase (iNOS). Nitric oxide is a free radical associated with cell growth and regeneration, blood vessel elasticity and COX-2 enzyme production. Resveratrol, rosemary, and turmeric support iNOS inhibition, thus inhibiting over-production of nitric oxide and the COX-2 enzyme.

A related irritation factor is also one of the latest scientific discoveries in cellular health: Nuclear Factor kappa-B (NF-kappa-B). NF-kappa-B works at the DNA level – at the blueprints of cells. When activated, this factor controls the genes that regulate cell growth, differentiation and regeneration. And blocking this factor is also associated with inhibition of both COX-2 and iNOS enzymes. Stinging nettle, milk thistle, and Chinese skullcap all block unhealthy NF-kappa-B activation in your body and thereby help support COX-2 inhibition.

### Cytokine Inhibition

Compounds called cytokines, or interleukins, can also stimulate biochemical pathways leading to joint discomfort. Cytokines are chemical messengers produced by the immune system to regulate defensive activity when they are stimulated. For example, cytokines are released by macrophages in response to stimuli such as tissue damage. This results in rapid escalation and amplification of cell number and response. Constant stress can shift this system out of balance, resulting in tissue discomfort. Bringing these compounds back into balance can preserve your short-term comfort and long-term health. INFLAMA-REST contains curcumin from the spice turmeric. Curcumin assists the body's inhibition of cytokine activity to support reduced cellular irritation. And Bioperine®, which is derived from black peppercorns, is added to assist curcumin assimilation.

### Stress Response: Joints and Muscle Support

Inhibition of chemical messengers involved in joint discomfort is just part of a Bio-Aligned strategy for relieving discomfort. Research has shown that emotional stress, particularly long-term, can directly affect the body and set in

motion mechanisms that cause physical discomfort. Ashwagandha and Chinese skullcap are herbs that help modulate the body's response to stress and may help ease aches and discomfort. Boswellia, ginger, quercetin, milk thistle, feverfew, Oregon grape root and bromelain (an enzyme found in pineapples) provide additional soothing relief to your cells and tissues.

Essential nutrients are also vital to maintaining your joint comfort. The tocotrienol forms of vitamin E, along with selenium, protect cell membranes from lipid-based free radicals. Magnesium aids energy metabolism in muscles and can reduce tenderness as well as muscle spasms. Zinc is essential for normal cellular repair mechanisms such as wound healing, and is important for the growth and maintenance of connective tissue. And manganese works to protect cells from oxidation and to build healthy connective tissue.

## Protecting DNA

To reduce cellular irritation, you need to protect the DNA in your cells. DNA is the blueprint for all the molecules in the body. If your DNA is altered or damaged, needed molecules may not be produced, leading to short term and eventually long term damage. Curcumin, from turmeric, has been shown in *in-vitro* studies to protect DNA against strand breakage. Quercetin has also been shown to directly protect DNA against strand breakage and base oxidation from free radicals and damaging chemicals, according to recent *in-vitro* research.

## Powerful Antioxidant Cellular Protection

Antioxidants are selfless bodyguards of your cells. They donate their own electrons to stabilize free radicals in your body. Thus, antioxidants absorb the damage that would have been done to your tissues. Some regulatory chemicals, such as nitric oxide, are powerful free radicals and oxidants. Oxidants also activate NFkappaB. Tissues, lipids, proteins, and DNA are extremely sensitive to oxidation. Quercetin, milk thistle, turmeric, ginger, rosemary, vitamin E and resveratrol are all

antioxidants that help modulate the activity of these compounds as well as protect cells and tissues from damage.

## Six Lifestyle Strategies for Fewer Aches

- Try Yoga or Tai Chi. Low-impact exercise based on slow fluid movements can improve mobility and flexibility as well as greatly reduce stress.
- Get in the pool. Exercising while in the pool reduces strain on the joints in addition to strengthening muscles.
- Maintain a healthy weight. Excess weight adds pressure to joints and connective tissues.
- Eat omega-3s. Omega-3 fatty acids found in salmon, and flax seeds, or in supplement form, further reduce cellular irritation and support healthy joints and tissues.
- Stay hydrated. Water is the basis of lubrication in connective tissues such as joints and skin and also supports detoxification.
- Supplement with glucosamine, chondroitin, MSM and hyaluronic acid. These supplements are structural building blocks that can help maintain healthy connective tissues.

INFLAMA-REST represents the Wellness Revolution now taking place in health care. Source Naturals is pleased to partner with your local health food store to provide INFLAMA-REST as a comprehensive Bio-Aligned Formula to not only relieve joint discomfort, but also protect, nourish and soothe imbalanced and irritated cells. Make INFLAMA-REST part of your health plan to live without joint discomfort.

## References

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- Park, K., et al. (1998). *Cancer Lett.* 129(2):139-144.
- Manna, S., et al. (1999). *Jrn Immunol.* (163): 6800-6809.

**INFLAMA-REST™ is a Bio-Aligned Formula™**  
**Multi-System Antioxidant Support**

<b>COX-2 Inhibition/Prostaglandin &amp; Leukotriene Synthesis</b>	Boswellia, Chinese Skullcap, Ginger, Green Tea, Holy Basil, Hops, Resveratrol, Silymarin, Turmeric, White Willow
<b>Inhibition of Cytokine Production</b>	Feverfew, Stinging Nettle, Turmeric
<b>Inhibition of Nitric Oxide Synthesis</b>	Green Tea, Quercetin, Resveratrol, Rosemary, Turmeric, Chinese Skullcap
<b>Inhibition of NF kappa B Activation</b>	Chinese Skullcap, Resveratrol, Rosemary, Silymarin, Stinging Nettle
<b>Stress Response: Joint and Muscle Support</b>	Ashwagandha, Chinese Skullcap, Feverfew, Holy Basil, Hops, Nattokinase, Oregon Grape Root, White Willow Bark, Magnesium, Vitamin D-3
<b>DNA Protection</b>	Quercetin, Resveratrol, Rosemary, Turmeric, Manganese, Zinc, Tocotrienols
<b>Antioxidant Defense</b>	Ginger, Resveratrol, Rosemary, Silymarin, Turmeric, Manganese, Selenium, Zinc, Tocotrienols



To learn more about Source Naturals Bio-Aligned Formulas™, visit our website, [www.sourcenaturals.com](http://www.sourcenaturals.com), or look for the Bio-Aligned Chart Book at participating health food stores.



*Strategies for Wellness™*

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