

Advanced Joint-Wise Formula Provides Effective, Natural Pain Relief

Products claiming to relieve pain are everywhere. But did you realize that many of those products are only providing you with *half* the pain relief you could be getting? And did you know that some of the most commonly used pain relief and anti-inflammatory products could actually cause you serious health problems?

Although the truth about many commonly used pain relievers may be disturbing, there are many safe, exciting new compounds that offer tremendous benefits to people seeking pain relief. And, a [unique new formula](#) has been developed to target pain and inflammation, with natural ingredients supported by scientific research. This formula works because of its ability to target both major pathways of inflammation, instead of just one.



At this time, the most-used over-the-counter and prescription medicines for relieving pain are medicines called “NSAIDs” (non-steroidal anti-inflammatory drugs). According to the *Physicians Desk Reference*, NSAIDs include aspirin, ibuprofen, and naproxen, among others.[1]

Although NSAIDs work by more than one mechanism, their most understood method of action is blocking the production of prostaglandins. Prostaglandins are a hormone-like substances in the body, some of which trigger the pain and inflammation responses you no doubt feel. [1] But there’s a problem with blocking prostaglandins.

The problem with blocking prostaglandin production is that prostaglandins also play a role in the regulation of blood pressure, blood coagulation, proper kidney function, secretion of gastric acid, and the protective barrier in the lining of the stomach. [2]

So when non-selective NSAIDs interfere with the “bad” actions of prostaglandins, they also impede the “good” actions of these important molecules, which can make you experience side effects. For example, by disrupting the production of prostaglandins in the stomach ...

NSAIDs can cause stomach pain, heartburn, ulcers and bleeding. [3]

To avoid the side effects of non-selective, prostaglandin-blocking NSAIDs, makers of pain relief products then created a new category of pain-relieving drugs developed called ***COX-2 inhibitors***. These new “selective” drugs were thought to work by blocking only the “bad” prostaglandins (which cause pain and inflammation) without inhibiting the “good” ones (which are critical in maintaining several normal body functions). [4]

As you might imagine, the new drugs that work through COX-2 inhibition are expensive. Also, these synthetic drugs have a very high block rate for COX-2, which results in serious adverse effects. More specifically, these drugs actually increase the harmful effects of a dangerous fat called thromboxane that promotes blood clots. In fact ...

One such drug was found to nearly double the risk of heart attacks and/or strokes! [5]

But there's more bad news: It's been found that synthetic arthritis drugs/NSAIDs may actually accelerate the progression of arthritis.[6]

Safer Alternatives to NSAIDS

When seeking safer alternatives to conventional NSAIDs, most people look to the dietary supplement industry. According to Jason Theodosakis, M.D., author of *The Arthritis Cure* and one of the world's foremost authorities on the clinical use of dietary supplements for arthritis, some of the most exciting research is being performed on a phellodendron bark extract called **Nexrutine**. As Dr. Theodosakis points out, extracts from this plant bark have been used by Chinese herbalists for hundreds of years.[2]

Unlike conventional COX-2 inhibitors, Nexrutine, extracted from the *Phellodendron amurense* plant, reduces the production of pro-inflammatory prostaglandins through a unique mechanism. It inhibits the gene expression of COX-2 rather than blocking the enzyme directly.[7] In other words, Nexrutine tackles the problem at its source, rather than interfering with COX-2 after it has been released. By working to inhibit COX-2 indirectly, rather than directly, Nexrutine's primary active ingredient actually promotes cardiovascular health, as reported in several published scientific studies.[8,9,10,11]

In contrast to NSAIDs, which can cause gastrointestinal (GI) irritation, bleeding and stomach upset ... Nexrutine was shown to be safe for the stomach and gastrointestinal tract. According to the results of a fifty-three-person study, 86% of the subjects stated that Nexrutine was gentle on the stomach.[12] And a later study which used a well-recognized animal model found Nexrutine to be free of the potential to produce gastric mucosal irritation.[13]

A series of animal studies have demonstrated that Nexrutine is an effective analgesic capable of providing relief over a prolonged period of time. As an added bonus, Nexrutine was shown to help promote relaxation without sedative effects.[14] This is important because pain is often accompanied by anxiety. Additionally:

79% of subjects who used Nexrutine for two weeks agreed that it helped relieve or avoid the general aches and pains associated with overexertion and physical activity.

No side effects were reported. [12]

An extensive literature review of Nexrutine's chemical constituents, plus the parent plant's use for hundreds of years, indicates this material is safe to use. Besides that, an acute toxicity study in rats (5g/kg) with 14-day observation revealed no untoward effects from Nexrutine. [15] No side effects are expected at the recommended (human) dosage of 250 mg, 3 times daily.

Nexrutine has demonstrated effectiveness in preventing release of the pro-inflammatory COX-2 enzyme, and current research points to an even more effective anti-inflammatory approach. The use of Nexrutine in combination with a unique and potent plant extract, 5-Loxin, is rapidly making all single inflammatory pathway inhibitor based products old news.

Extensive research proves the need for dual inflammatory pathway inhibition in order for an anti-inflammatory therapy to achieve maximum results. COX-2 inhibitors help quench the fires of inflammation through the “COX pathway,” but inflammation resulting from another source, the enzyme 5-lipoxygenase, may actually increase through the “5-LOX pathway” when only COX-2 is inhibited. That means when only one of the two inflammatory pathways is targeted, the other one is left open to flood your body with sensations of pain. So what’s the solution?

Fortunately, there are substances called “boswellic acids” which reduce inflammation by inhibiting the enzyme 5-lipoxygenase. Boswellic acids are the active ingredients found in the resin of the *Boswellia serrata*, a tree native to India. Resin from the trunk of this tree has been used in Indian medicine since ancient times. Boswellic acids have been found to have much the same effect as NSAIDs, typically used for arthritis, but without the irritating effect on the stomach.[16]

Clinical research proves the effectiveness of boswellic acids. Indeed, a standardized extract of *Boswellia* yielded dramatic results in the treatment of osteoarthritis. All of the patients in this randomized, double-blind, placebo-controlled, crossover study, reported a significant decrease in pain.

The frequency of joint swelling was also substantially reduced.

Furthermore, the extract was well-tolerated by the patients in this study.[17]

Similarly, in a review of 12 clinical trials (conducted in Germany and India) on the use of boswellic acids in the treatment of Rheumatoid Arthritis (RA), the extract was effective in long-term sufferers of this condition. *Boswellia* was also effective in patients who had responded poorly to conventional treatments. There were no significant side effects associated with the treatment.[17]

A newly developed boswellic acids fraction, **5-Loxin**, is standardized to contain a high percentage of “AKBA” (3-acetyl-11-keto-beta boswellic acid), the most potent inhibitor of the pro-inflammatory enzyme 5-lipoxygenase.[18] As a result,

5-Loxin blocks the chemical reaction that leads to the formation of inflammation-producing leukotrienes from arachidonic acid.

In a recent study, 5-Loxin was shown to inhibit the release or “expression” of certain enzymes (matrix metalloproteinase) that selectively destroy peptide bonds and structural proteins such as collagen and cartilage. This study also revealed that 5-Loxin significantly inhibited the expression of the specific molecules (“VCAM” and “ICAM”) responsible for recruiting white blood cells to the area of inflammation, thus reducing the associated swelling and pain.

Excited by these results, researchers went on to test the efficacy of 5-Loxin in a recognized model of inflammation, carrageenan-induced rodent paw swelling. Using the proven anti-inflammatory agent ibuprofen as a control, the researchers concluded that 5-Loxin was shown to effectively diminish inflammation. [19] In addition to its effectiveness as an anti-inflammatory, 5-Loxin has been shown to have an excellent safety profile, with no toxicity noted at 100 times the therapeutic dose. [20]

Historically, one of the main disadvantages associated with the use of ordinary extracts of boswellia is that large dosages were often required for effectiveness. Now that scientists have successfully concentrated AKBA **through the development of 5-Loxin**, however, **it is possible to derive the benefits of boswellia extract at much lower therapeutic doses.**

For example, a recent 90-day double-blind, randomized, placebo-controlled study was conducted to evaluate the efficacy and safety of 5-Loxin in the treatment of **osteoarthritis (OA) of the knee**. In this clinical trial involving 75 patients, it was found that 5-Loxin safely **reduced pain and improved physical functioning significantly** in osteoarthritis patients. The researchers concluded that “5-Loxin may exert its beneficial effects by controlling inflammatory responses through reducing pro-inflammatory modulators, and it may improve joint health by reducing the enzymatic degradation of cartilage in osteoarthritis patients.”[21]

The development of arthritis is often accompanied by increased production of both leukotrienes and prostaglandins from arachidonic acid. These two substances may contribute simultaneously to joint damage, pain and inflammation.

Most arthritis treatments, however, target only the COX-1 and/or COX-2 pathways.

Unfortunately, this approach inhibits prostaglandins without blocking leukotrienes. Such a limited approach is very unwise because Leukotriene B4 is a pro-inflammatory agent that is especially destructive to the arterial lining and joints.[21,22] Also, it’s important to note that traditional anti-inflammatory drugs have been shown to actually increase leukotriene B4 and other pro-inflammatory mediators.[23] That means there needs to be a [better approach](#). But what?

The good news for arthritis sufferers is that Nexrutine and 5-Loxin, when used in tandem, inhibit both pro-inflammatory leukotrienes and prostaglandins![19] Researchers point out that this dual 5-LOX/COX-inhibiting combination provides a safer, more balanced and more effective approach to the treatment of inflammation.[24] That’s why arthritis sufferers will want to add Nexrutine and 5-Loxin to their supplement regimen.

Odds are, you’ve probably heard of natural joint health supplements containing Glucosamine, Chondroitin and MSM (organic sulfur). These ingredients can be tremendously helpful to you – and when coupled with Nexrutine and 5-Loxin they become a “dream team” formula.

Why Painful Joints Love Glucosamine, Chondroitin & MSM

Glucosamine and Chondroitin are “building blocks” and “mortar” with which the body can repair damage caused by osteoarthritis or injury. Each works to inhibit the body’s own

destructive enzymes and keep them from causing pain and inflammation.[25,26,27,28] As an added bonus, glucosamine also keeps joint fluid thick and slippery, while chondroitin clears out “garbage” that clogs joint spaces and blood vessels.[26,29] Chondroitin is a basic constituent of the gel-like matrix between cartilage cells.[26] Glucosamine is a basic structural component of the glycosaminoglycans and proteoglycans the body uses to build healthy joint cartilage. Unfortunately, the body’s innate ability to manufacture glucosamine appears to decrease with age, in some people.[30]

The benefits of Glucosamine sulfate supplementation are backed by more than 300 scientific investigations and more than 20 double blind studies which have demonstrated its effectiveness. In addition:

More than 20 published clinical trials have shown a success rate of 72 percent to 95 percent in various forms of osteoarthritis.[30]

Glucosamine sulfate has also proven its clinical effectiveness through its use by millions of people worldwide.[30]

Clinical experience has shown that **MSM** (methyl sulfonyl methane), also called “organic sulfur,” is especially effective at reducing pain in severe cases.[30] A team of respected physician-researchers recently published a comprehensive volume explaining MSM’s action. MSM sulfur is taken up by two of the body’s vital amino acids, methionine and cysteine. As the eighth most abundant element in our bodies,[30] sulfur is a major ingredient of important amino acids the body uses to form enzymes, hormones, antibodies, muscles, bones, hair, teeth, blood cells, the brain, skin, and the other organs of the body. Also, sulfur-containing compounds called glycosaminoglycans are abundant in the cartilage and synovial fluid of healthy joints.[31]

Furthermore, medical studies over the years have found that arthritic joints have lower than normal sulfur levels. In a 1995 study, the sulfur concentration in arthritic cartilage was discovered to be about one-third the level of normal cartilage.[31] **MSM helps provide the joints with an abundant supply of sulfur** needed for proper functioning and repair. The result:

Significant improvement as reflected in less pain, less stiffness and greater mobility.

Even for crippling **rheumatoid arthritis**, the most inflammatory of arthritic conditions, MSM can provide benefits. In a study of mice that were genetically prone to rheumatoid arthritis, the addition of MSM to the animals’ drinking water significantly protected mice from breakdown in joint cartilage.[31]

Two double blind, placebo-controlled random studies demonstrated that **MSM has powerful benefits for hair and nails**. After six weeks cosmetologists could identify which subjects had taken MSM by the appearance of the hair alone. MSM stimulated marked improvements in hair length, brilliance and thickness of fibers. Similarly, people who took MSM in the nail study experienced an 80 percent improvement, evidenced in significant differences in strength, thickness and appearance.[32]

A unique new all-natural formula combines all five compounds— 5-Loxin, Nexrutine, Glucosamine, Chondroitin and MSM— for people who demand total relief from pain and inflammation.

This formula is called [JointWise Ultra](#), and it is the ONLY formula of its kind with the right ratio and dosage of each of these key ingredients ... so you experience five-fold action for joint and muscle comfort and flexibility

Studies Confirm Chondroitin's Benefits

“GAGs” (glycosaminoglycans) are important constituents of both soft tissue and bones. Chondroitin sulfate is the most abundant GAG in the human body and is a commonly used nutritional supplement. Many studies have recorded chondroitin's ability to stop the deterioration of arthritis.[35] Chondroitin helps suck fluid into the spongy joint cartilage tissues where the fluid acts as a shock absorber. It keeps the cartilage structure open and flexible rather than compacted and hard, both nourishing and removing waste products from the cartilage.[26]

A meta-analysis of seven double-blind, placebo controlled trials with chondroitin showed a 40.2 percent improvement compared to controls.[36] A second survey looked at randomized, double-blind, placebo-controlled studies that involved 227 patients. In terms of pain and joint motion, patients supplementing with chondroitin sulfate averaged 50 percent greater improvement than placebo groups. The *Journal of the American Medical Association* published a third meta-analysis in March 2000 and again confirmed these benefits. They found that chondroitin delivered significantly greater average effects than glucosamine.[37]

Additionally, a 2009 report in the journal *Life Science* provides additional confirmation that chondroitin sulfate is beneficial in the treatment of osteoarthritis through three main mechanisms: 1) It stimulates extracellular matrix, which are composed mostly of glycosaminoglycans (GAGs), **supporting collagen and elastin** (or “bounce”) in cellular spaces; 2) it **suppresses inflammatory mediators**, and 3) it **inhibits cartilage degeneration**.[41] The support of elastin is important, because it is a protein in connective tissue responsible for the flexibility of many tissues in the body. Likewise, prohibiting cartilage degeneration is important, because cartilage is the stiff yet flexible connective tissue found in many areas of the body, including the joints.

Landmark British Study: Glucosamine Actually Stopped Arthritic Degeneration

Glucosamine sulfate really does reduce the progression of arthritis, according to results of a large, long term study published in the United Kingdom's prestigious journal *The Lancet*. In the randomized, double blind, placebo-controlled study, 212 patients suffering from knee osteoarthritis received either 1500 mg of Glucosamine or a placebo for a three-year period.[33] Patients who received a placebo experienced progressive joint space narrowing, representing further loss of cartilage, but patients who received Glucosamine showed no further joint space narrowing. Additionally, pain and function limitation worsened with the placebo, but improved with Glucosamine.

The study also demonstrated that Glucosamine is a safe compound. The Belgian principal investigator noted “We have shown that a treatment may be able to at least reduce the progression of osteoarthritis.”[33] In a commentary published in the same issue, American arthritis specialist Tom McAlindon, MD, Boston University, suggested that physicians who do not learn about the valuable potential of nutritional products are turning their backs on beneficial therapeutic resources and lose credibility with the public.

Sodium-free Glucosamine Recommended

Nutrition experts note that Glucosamine sulfate stabilized with a mineral salt is the form that has been tested the most in arthritis trials.[35] And because the average Western diet already contains far too much sodium and not enough potassium, a sodium-free form that is stabilized with potassium is preferred.[34]

Inflammation’s role in the most feared illnesses of middle and old age

It is now recognized that inappropriate, chronic inflammation plays a critical role in many diseases, including cardiovascular diseases, inflammatory and autoimmune disorders, neurodegenerative conditions, infection and cancer.[38]

When inflammation becomes chronic rather than temporary, the body turns on itself. It destabilizes cholesterol deposits in the coronary arteries, leading to heart attacks and/or strokes. It destroys nerve cells in the brains of Alzheimer’s victims. It may also encourage the production of abnormal cells and facilitate their transformation into cancer. In other words, chronic inflammation may be the engine that drives many of the most feared illnesses of middle and old age.[39]

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