

# **Reducing Joint Inflammation with Plant-Based Nutrients**

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### The Emergence of Plant-Based Nutrients

A recent United States national survey found that one in three adults reported having joint pain within the past thirty days. Knee pain was the most common complaint followed by shoulder and hip pain. Joint pain can affect any part of your body...ankles and feet to your shoulders and hands. As one gets older, painful joints become increasingly common. Human beings in older age manifest the many challenges from their life experiences. These joint issues are a result of having been there and having done that.

Many different conditions can lead to painful joints, including osteoarthritis, rheumatoid arthritis, psoriatic arthritis, bursitis, gout, strains, sprains and other injuries.

In recent times, joint pain management has trended with the use of NSAID (non-steroidal anti-inflammatory drugs) such as aspirin, ibuprofen or naproxen sodium and various prescription medications known as cox-2 inhibitors. With widespread use of these prescription medication cox-2 inhibitors, the USA Food and Drug Administration (FDA) withdrew approval and the medications were taken off the market due to their increase risk of heart attack, stroke and cardiovascular events. They also increased the potential for gastro-intestinal bleeding.

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#### The Best TEN Plant-Based Nutrients for Joint Pain

A New Age formulation for reducing joint pain should contain the following nutrients (offered in alphabetical order): *Boswellia* (Indian Francincense), Bromelain, Capsaicin, Curcumin, Citrus Bioflavonoids, Coriander, Devils Claw, Ginger Extract, Yucca root and Papain. Each of these plant-based nutrients has clinically-proven success in relieving and in many cases eliminating joint pain. All have availability individually for purchase as non-prescription or over-the counter (OTC) ingredients. No physician-written prescription is required to access these nutrients.

*Boswellia* (Indian Frankincense) is an herbal extract taken from the *Boswellia serrata* tree and has been used for centuries in Asian and African folk medicine to treat chronic inflammatory illnesses. It is known to be an effective painkiller and may even prevent the loss of cartilage. A note of caution is that *Boswellia* may interact with and decrease the effects of NSAID's and should not be used by pregnant women as it can stimulate menstruation (be an emmenagogue) and induce miscarriage by increasing blood flow in the uterus.

**Bromelain** is an enzyme found in pineapple juice and in the pineapple stem. Commercial bromelain is typically made with stem bromelain and also contains other enzymes and calcium. It is used for reducing swelling and seems to cause the body to produce substances that fight pain. It even contains chemicals that interfere with the growth of tumor cells and slows blood clotting. Its action to reduce joint inflammation is supported by its ability to reduce edema (fluid retention or swelling).

**Capsaicin**, contained in all hot peppers, pimento, paprika and cayenne pepper, can control the release of substance P, a neuropeptide, which is a part of the system the body uses to detect injury (inflammation for example). Capsaicin "tricks" the nervous system of the body into thinking an injury has occurred by causing the body to release the chemical substance P. When capsaicin is taken routinely substance P produced by the body becomes depleted in that area of the body (ie. eliminates inflammation).

**Citrus Bioflavonoids** found in citrus fruits include diosmin, hesperidin, rutin, naringin, tangeretin, diosmetin, narirutin, neohesperidin, nobiletin and quercetin. Rutin (as with its counterpart bioflavonoids) is and quercetin are typically the most prominently available individual ingredients as dietary supplements. Apples are full of rutin and is also found in green tea. Rutin helps the body produce collagen which helps joint tissue to regenerate. These bioflavonoids can also be found in other plant sources such as buckwheat. Different citrus fruits contain varying concentrations of each of these plant nutrients. Bioflavonoids are widely used in Europe to treat diseases of the blood vessels and lymph glands. They apparently strengthen the walls of the vessels while possessing anti-oxidant properties supporting joint strengthening. A note of caution exists for rutin in that women who are pregnant or breastfeeding should not take rutin supplements.

**Curcumin** is a substance contained in the spice turmeric, and many studies suggest that is eases symptoms of osteoarthritis and rheumatoid arthritis such as pain and inflammation. Curcumin, as part of turmeric is one of the main components of curry powder and also has anti-oxidant properties. As with *Boswellia*, pregnant women should not use turmeric supplements as they can potentially increase bleeding. No curcumin should be taken for at least two weeks before any surgery.

**Coriander (cilantro)** are both derived from the same plant. Coriander is composed of the light brown seeds while cilantro represents the citrus-flavored leaves. Cilantro is also called Chinese parsley. This herb is a powerful cleansing agent that targets many of the toxic metals to which humans are regularly exposed that deposit in muscle tissue and in bones and contribute to inflammation. Cilantro is an excellent source of Vitamin K, magnesium and manganese which supports bone growth and strength. It also provides thirteen other vitamins and minerals with many providing the minimum daily allowance required for health and wellness. All of these key vitamins and minerals in cilantro offer a powerful anti-oxidant ability to reduce stress in tissues.

**Devil's Claw** is an herb native to Africa and gets its name from the appearance of its fruit, which is covered with hooks meant to attach onto animals in order to spread the seeds. The roots and tubers of the plant are used for medicinal purposes. Devil's Claw contains bitter

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chemicals that decrease inflammation and swelling and the resulting pain. There are no known side effects or interactions with other drugs.

**Ginger** is the most widely available and widely used herbal remedy on the planet. It is derived from the tuberous rhizome (underground stem of the plant). It inhibits the production of immune-system components called cytokines or chemicals that create a long-term tendency toward inflammation. It also stimulates blood circulation and makes it useful in treating joint inflammation marked by swelling and pain. Relief from pain and swelling through oral consumption of powdered ginger relieves symptoms without the side effects of nonsteroidal anti-inflammatory drugs (NSAIDS) and steroids which are helpful but can cause serious side effects. It has been shown to decrease TNF (tumor necrosis factor) in some cancer situations.

**Papain** is a protein-dissolving enzyme extracted from the milky white latex of unripe papaya fruit. Green papaya is a richer source of the therapeutically active papain than is the ripe fruit. Several studies have shown that papain helps with bruises, sore muscles, sprains and strains including joint pain relief. It is often combined with bromelain (discussed earlier). Papain breaks down consumed wheat gluten which is known to increase joint inflammation, particularly in the knees. Wheat gluten, genetically modified, is found in as much as 80% of all processed foods today. Pregnant women can eat ripe papaya fruit in moderation but should not use unripened papain, papaya latex or the herb's leaves.

Yucca comes from the dried leaves of as many as forty or more species of the plant that grows across North America, primarily in arid, warmer sections. These hardy trees or shrubs have stiff, ever-green lance-shaped leaves that emerge off erect central stems with white or greenish flowerheads. For centuries, various Native American tribes relied on the yucca plant for many uses, most particularly arthritic and rheumatic pain and inflammation. The primary active ingredients in yucca are steroidal saponins (chemically known as a grouping of hydrophilic and lipophilic glycosides).

### Worldwide Use for Plant-based Nutrients

North America has accelerated its embrace for the use of these nutrients which have been used for centuries by Asian, African, European and South American cultures. Most herbal or spice plant-based nutrients and various combinations have been researched for possible human side effects or drug interaction potential. It is important before initiating use of these naturally-occurring anti-inflammatory agents for joint pain, however, to consult with a physician or pharmacist regarding their use.

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