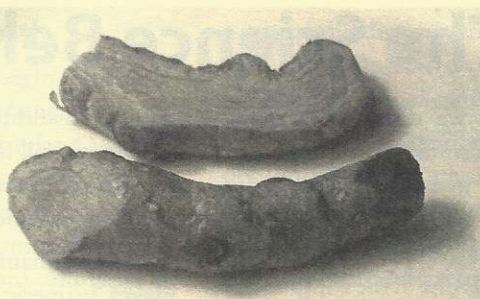


Turmeric and Curcumin



Modern Research Shows the Many Benefits of this Traditional Ayurvedic and Chinese Herb

Every so often, scientific research propels an herb to celebrity status. It's not that herbalists weren't already using it to help people get well; it's just that research backing up those uses suddenly became available. Turmeric is one of those herbs, which is why we've chosen to make it the focus of this issue of *Sunshine Sharing*.

Turmeric is an Asian spice that gives curry its yellow color. Related to ginger, this rhizome is a classic ingredient in Indian cooking and has a long history of use in Ayurvedic and Traditional Chinese Medicine. One of its constituents is a curcuminoid known as curcumin. Curcumin has been the subject of more than 60 clinical trials and the National Library of Medicine has nearly 200 scientific investigations of curcumin in its archives. This makes turmeric one of the most studied botanicals in modern history, and the research shows that both turmeric and its constituent curcumin have wonderful potential for helping a wide variety of health problems.

For starters, researchers found that turmeric and curcumin have antioxidant, anti-inflammatory, antiarthritic, antitumor, anti-ischemic and antimutagenic properties. So, let's look at what all these terms mean in terms of your health as we examine the research that has been done on this herb.

Turmeric in Traditional Medicine

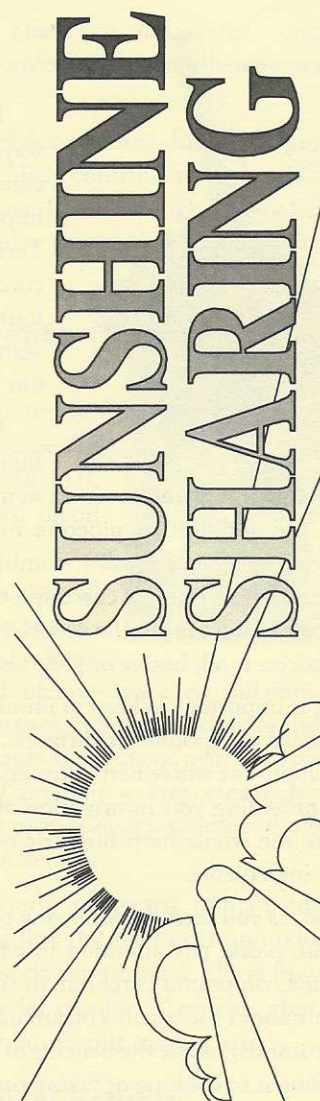
Preparations of turmeric have been used in Ayurvedic medicine for thousands of years. In India and other parts of Asia, most adults consume turmeric on a daily basis. Ayurvedic physicians regard it as a general tonic and blood purifier and use it for a wide variety of health problems.

In Ayurveda, turmeric is used to reduce inflammation and ease pain in problems like arthritis and rheumatism. It also plays a key role in the treatment of diseases involving the liver, gallbladder and digestive system. It stimulates the flow of bile, a property known as cholagogue and can be helpful along with other herbs for gall bladder attacks and gallstones. It is helpful for digestive problems like dyspepsia, coughs and upper respiratory congestion and the common cold. Externally, turmeric has been applied to insect bites and wounds as an antiseptic.

Turmeric has also been used in Traditional Chinese Medicine (TCM). It is considered a blood mover that breaks up stagnation and relieves pain. It is also used to relieve stagnant conditions in the liver and to reduce heat (inflammation or irritation) in the liver, gallbladder and blood.

TCM practitioners use turmeric for menstrual, chest or abdominal pain, gallstones and jaundice, as a topical application for sores, and internally and topically for easing pain from injuries. It is also used for arthritis and rheumatism. The Chinese also consider turmeric to be helpful in some cases of anxiety, epilepsy, seizures and delirium. It is considered a highly useful and versatile herb in TCM.

Look inside to discover how science is validating the traditional uses of turmeric



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Your guide to better health the natural way.

Important Notice

The information in *Sunshine Sharing* is for educational purposes only and should not be used to diagnose and treat diseases. If you have a health problem, we recommend you consult a competent health practitioner before embarking on any course of treatment.

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The Science Behind Turmeric



Before we discuss the many ways you can use turmeric and/or curcumin to improve health, it's important to know the difference. Turmeric is the herb or spice, while curcumin is one of the compounds found in turmeric. Much of the research has been done on curcumin, but not on turmeric.

Curcumin is available as a supplement. The formula **CurcuminBP** contains turmeric extract standardized to 95% curcuminoids with the addition of piperine from black pepper. In a study reported in *Planta Medica*, combining piperine with curcumin increased absorption of curcumin twenty-fold, a 2000% increase. Curcuminoids are also fat soluble, so taking them with good fats like coconut oil, butter or ghee also enhances their utilization.

It is important to keep in mind that curcumin is not the only beneficial compound in turmeric. So, we're including information about the whole herb, turmeric and not just curcumin. We're also providing you information about numerous formulas that utilize the whole herb turmeric or a turmeric extract as one of their ingredients.

So, as you read the following properties of turmeric and curcumin, please pay attention to whether we're talking about the isolated compound curcumin or the whole herb turmeric. When we talk about the benefits of curcumin, you can obtain those from CurcuminBP, while the benefits of turmeric itself can be obtained by using it in cooking or taking one or more of the formulas that utilize it. With that in mind, let's get started.

Antioxidant Activity

Turmeric has antioxidant properties due to several constituents, one of them being curcumin. Both turmeric and curcumin exhibit antioxidant effects, although turmeric contains other antioxidant compounds besides curcumin. Turmeric can inhibit the oxidation of fats, which gives it protective effects for the cardiovascular system, brain and eyes. Because of this, turmeric is an ingredient in NSP's **Alpha Lipoic Acid** and **Grapine** products, where it enhances the antioxidant properties of these compounds. The antioxidant properties of turmeric are also utilized in the formula **Perfect Eyes**, which contains many antioxidant herbs and nutrients that protect eye health.



A Powerful Anti-Inflammatory

Extensive research over the past few decades has shown that curcumin inhibits pro-inflammatory compounds like COX-2 enzymes or the expression of NF-kappa B genes. It inhibits arachidonic acid metabolism, the metabolic pathway that creates pro-inflammatory chemical mes-

sengers. In addition to curcumin, turmeric contains turmerin and an essential oil that provide additional anti-inflammatory action, but both turmeric and curcumin are useful for numerous diseases involving inflammation.

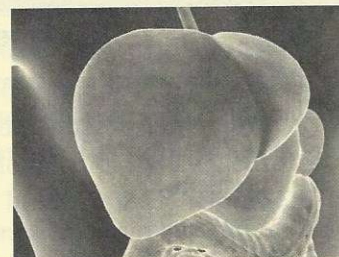
Since inflammation lies at the root of many diseases, this makes turmeric very helpful in promoting general health and easing pain caused by inflammation. This may explain the link between consumption of turmeric and a reduced occurrence of diseases associated with chronic inflammation and oxidative stress, such as cataracts, Alzheimer's and memory loss. It also makes both curcumin and turmeric helpful for easing inflammation and pain in both rheumatoid arthritis and osteoarthritis.

In a study of 18 patients with rheumatoid arthritis, taking 1200 mg of curcumin daily was as effective as taking 300 mg per day of phenylbutazone, a non-steroidal anti-inflammatory drug for reducing morning stiffness and joint swelling. In another clinical trial, taking a 500 mg of a turmeric extract twice daily significantly reduced pain and improved functionality in patients with osteoarthritis of the knee. Patients taking this extract had significantly reduced usage of analgesics and NSAIDs.

The formula **IF Relief** contains an extract of turmeric and boswellia, along with willow bark, andrographis and mangosteen pericarp. It is a powerful anti-inflammatory formula that can be very helpful for pain due to inflammation, injuries or the aftermath of surgery. Its effectiveness can be enhanced by taking **Super Omega-3 EPA** with it.

Supporting the Liver and Gallbladder

One of the main uses of turmeric in TCM and Ayurveda is as a tonic for the liver. It is both hepatoprotective and an aid to liver detoxification. It increases glutathione levels and glutathione-S-transferase activity, which protects the liver from damage and enhances glutathione con-



jugation, one of the major liver detoxification pathways. Turmeric has been used to treat both hepatitis and jaundice. Turmeric can be combined with other hepatoprotective herbs like milk thistle and schizandra to prevent and treat chronic liver disease.

The Chinese **Blood Stimulator** formula, which is used to help strengthen the liver and improve the quality of the blood, contains turmeric. Turmeric is also an ingredient in the formula **Ayurvedic Skin Detox**, which is a liver cleansing formula that helps to clear up skin conditions like acne and rashes. Turmeric has been used traditionally for many skin diseases, including psoriasis, eczema, scleroderma, vitiligo, acne, rashes and warts.

Turmeric also stimulates bile flow and has been used to ease both a sluggish gall bladder and to help with gallstones. It is usually combined with other cholagogue herbs for this purpose.

Turmeric for Digestive Health

Herbalists know that many health problems begin in the gastrointestinal (GI) tract. Turmeric has numerous benefits for the digestive system. According to the University of Maryland Medical Center, a double-blind placebo-controlled study confirmed the effectiveness of turmeric in reducing bloating and gas in patients with indigestion. It increases mucus production in the stomach and can ease symptoms of dyspepsia (indigestion) and gastritis (stomach pain and inflammation).

In one study of curcumin's effects on children with moderate-to-severe Juvenile Crohn's disease with impaired growth, treatment with a nutraceutical cocktail containing curcumin, *Boswellia serrata*, bovine colostrum, fish peptides, and a multivitamin produced long-term remission and accelerated growth. Research also suggests that turmeric may help to prevent and heal ulcers.

Turmeric is an ingredient in **Artemisia Combination**, a formula for getting rid of intestinal parasites. It is also found in the fiber blend **LOCLO** and in **SynerProTein**.

Immune Support

Curcumin and turmeric have immune enhancing benefits. The essential oil found in turmeric is antifungal and mildly antibacterial, which is why the herb has been used topically for skin infections. The essential oil also has antihistamine properties which may contribute to its usefulness for diseases involving upper respiratory congestion like colds.



Curcumin has been shown to interfere with the replication of viruses. Low doses were shown to inhibit replication of Herpes simplex. Curcumin also increases white blood cell counts and macrophage activity.

Turmeric and/or curcumin may have protective ability against hepatitis C, several strains of *Streptococcus*, *H. pylori* and *E. Coli* and others. The mechanisms of action are too complex to describe here, but in the case of hepatitis C, a study found that curcumin effectively prevented the hepatitis C virus from entering human liver cells.

The adaptogenic formula **AdaptaMax** contains turmeric, along with other immune enhancing herbs like astragalus and reishi. This makes it a beneficial tonic for reducing stress and enhancing immune activity at the same time.

Anti-Cancer Activity

Both curcumin and turmeric show promise as remedies to help prevent and possibly aid in the treatment of cancer. A number of studies have shown that curcumin has anti-mutagenic activity, meaning that it can inhibit cells from mutating and becoming cancerous. It also has the ability to induce apoptosis (programmed cell death) in cancer cells without affecting healthy cells. It also protects cells against cancer caused by chemicals including tobacco smoke, benzo(alpha)pyrenes and nitrosamines.

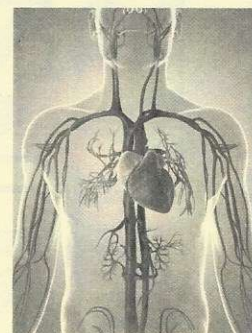
One study found that curcumin inhibits the growth of cancerous colon cells at the initiation, promotion and progression

stages of the disease. And in a phase one clinical trial, curcumin dramatically enhanced the effectiveness of chemotherapy in treating gastrointestinal cancer.

Immune dysfunction is well documented during the progression of cancerous tumors and likely contributes to the ability of tumors to evade immune activity. In several high quality studies, curcumin demonstrated the ability to stimulate immune function and inhibit tumor growth.

Cardiovascular Benefits

By reducing oxidation of fats and inflammation, turmeric is useful for reducing the risk of heart disease. In animal studies, turmeric lowered LDL cholesterol levels and prevented blood clots.



A study using a transgenic animal model indicated that curcumin diminished plaque burden and overall inflammation, but it also increased plaque-associated inflammatory cells, suggesting enhanced clearance. A separate study found that curcumin shrank the size of plaques and reduced neurite dystrophy in an Alzheimer mouse model. Curcumin was reported to decrease serum cholesterol levels, thereby protecting against the pathological changes that occur with atherosclerosis.

In animal studies, curcumin protected human and rat endothelial cells (the cells that line the arteries) from oxidative stress. Curcumin and/or turmeric can improve blood flow and reduce the formation of arterial plaque. They can also help protect the brain from both trauma and strokes.

Neurological Activity

Turmeric has potential benefits for the nervous system. The tubers have been used for the treatment of neurological disorders in TCM. They are an important ingredient in the traditional Chinese formula **Stress Relief**, which is helpful for calming anxiety and helping nervous system problems like heart palpitations, high blood pressure, absentmindedness, dizziness, convulsions, neurosis, pains in the chest due to stress, emotional instability and excessive perspiration.

Turmeric also shows promise in preventing or slowing the progress of Alzheimer's disease. When combined with vitamin D3,

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Additional Help and Information

For more information about turmeric and curcumin and supplements containing them contact the person who gave you this newsletter. You can also consult the following resources:

Ayurvedic Herbs by Virender Sodhi, MD

Herbal Therapy and Supplements by Merrily A. Kuhn and David Winston

Chinese Traditional Herbal Medicine, Vol II by Michael Tierra and Lesley Tierra

The Comprehensive Guide to Nature's Sunshine Products, 6th edition by Steven Horne and Kimberly Balas

Discover the Healing Benefits of Turmeric and Curcumin

Turmeric is an Asian spice that is a common ingredient in curry powder. A relative of ginger, this herb has been used in Traditional Chinese Medicine and Ayurvedic medicine in India for thousands of years. Today, scientific research is verifying and expanding our understanding of how turmeric and one of its chief constituents, curcumin, can benefit health.

Some promising effects have been observed in patients with various pro-inflammatory diseases, including arthritis, cardiovascular disease, ulcerative colitis and proctitis, Crohn's disease, irritable bowel disease, gastric inflammation, tropical pancreatitis, peptic ulcer, gastric ulcer, idiopathic orbital inflammatory pseudotumor, vitiligo, psoriasis, acute coronary syndrome, atherosclerosis, diabetes, diabetic nephropathy, diabetic microangiopathy, lupus nephritis, renal conditions, acquired immunodeficiency syndrome (AIDS), biliary dyskinesia, cholecystitis, chronic bacterial prostatitis, and certain cancers. Curcumin has also shown protection against hepatic (liver) conditions, chronic arsenic exposure, and alcohol intoxication.



Continued from page 3

curcumin was found to clear the brain of amyloid beta, which forms the plaques considered to be the hallmarks of Alzheimer's disease.

Other Benefits

Both curcumin and turmeric may be helpful for prostate problems in men. In a study of curcumin's effects on 85 patients with benign prostatic hyperplasia (BPH), the extract markedly decreased PSA levels and inflammation, while reducing the incidence of the condition progressing to prostate cancer. The study also verified that curcumin has synergistic effects with isoflavones to suppress PSA production in prostate cells.

An animal study found that turmeric significantly reduced immediate airway constriction and late airway hyperreactivity to histamine—a chemical released by cells in response to injury and

various allergens. The volatile oil in turmeric, not curcumin, appears to be responsible for its anti-asthmatic properties.

One study showed that an alcohol extract of turmeric reduced blood sugar levels. When combined with other blood sugar reducing herbs in Ayurvedic medicine, such as bitter melon, the effect was even greater. The **Ayurvedic Blood Sugar Formula** combines turmeric, bitter melon and other herbs used in India to reduce blood sugar, making it helpful for both diabetes and metabolic syndrome.

You can obtain the benefits of turmeric by using it in food or taking supplements containing it. For arthritic pain, severe digestive problems or other more serious and chronic inflammatory conditions you can take CurcuminBP. Dose-escalating studies have verified that curcumin has virtually no toxicity, with doses as high as 12 grams per day over 3 months producing no significant side effects.