

SUSTAINABLE LIVING GUIDE: 80. BENEFICIAL EFFECTS OF USING TURMERIC¹

Dr. Mercola[©]

For more than 5,000 years, turmeric has been an important part of Eastern cultural traditions, including traditional Chinese medicine and Ayurveda. Valued for its medicinal properties and warm, peppery flavor, this yellow-orange spice has more recently earned a name for itself in Western medicine as well. Turmeric comes from the root of the *Curcuma longa* plant, which is native to Indonesia and southern India, and is widely used as an ingredient in curry dishes and yellow mustard. As research into this powerful spice has increased, it has emerged as one of nature's most powerful potential healers. Said Dr. David Frawley, founder and director of the American Institute for Vedic Studies in Santa Fe, New Mexico:

“If I had only one single herb to depend upon for all possible health and dietary needs, I would without much hesitation choose the Indian spice Turmeric. There is little it cannot do in the realm of healing and much that no other herb is able to accomplish. Turmeric has a broad spectrum of actions, mild but certain effects, and is beneficial for long term and daily usage. Though it is a common spice, few people, including herbalists know of its great value and are using it to the extent possible. It is an herb that one should get to know and live with.”

Turmeric's Beneficial Effects in a Nutshell

Strengthens and improves digestion

- Reduces gas and bloating
- Assists in the digestion of protein and with rice and bean dishes
- Improves your body's ability to digest fats
- Promotes proper metabolism, correcting both excesses and deficiencies
- Maintains and improves intestinal flora
- Improves elimination of wastes and toxins

Supports healthy liver function and detox

- Turmeric helps increase bile flow making it a liver cleanser that can rejuvenate your liver cells and recharge their capability to break down toxins
- Helps to prevent alcohol and other toxins from being converted into compounds that may be harmful to your liver
- Supports formation of healthy tissue

Purifies your blood

- Stimulates formation of new blood tissue
- Anti-inflammatory: Helps to reduce irritation to tissues characterized by pain, redness, swelling and heat

Contains curcuminoids that fight cancer, arthritis, and Alzheimer's

- Curcuminoids are potent phytonutrients (plant-based nutrients) that contain powerful antioxidant properties

¹ Mercola.com, February 17, 2009

- Counteract the damaging effects of free radicals in your body
- Relieve arthritis pain and stiffness, anti-inflammatory agent
- Anti-carcinogenic: "Curcumin has been shown to prevent a large of number of cancers in animal studies. Laboratory data indicate that curcumin can inhibit tumor initiation, promotion, invasion, angiogenesis and metastasis."[1]
- Supports treatment of Alzheimer's disease: "Because Alzheimer's disease is caused in part by amyloid-induced inflammation, curcumin has been shown to be effective against Alzheimer's. Clinical trials are in progress at UCLA with curcumin for Alzheimer's."[2]

Curcumin: Turmeric's Active Anti-Inflammatory "Ingredient"

Most notably turmeric is known for its potent anti-inflammatory properties, which come from curcumin -- the pigment that gives turmeric its yellow-orange color, and which is thought to be responsible for many of its medicinal effects. There are an estimated three to five grams of curcumin in 100 grams of turmeric. Curcumin has been shown to influence more than 700 genes, and it can inhibit both the activity and the synthesis of cyclooxygenase-2 (COX2) and 5-lipoxygenase (5-LOX), as well as other enzymes that have been implicated in inflammation.[3]

Turmeric's Cancer-Fighting Properties

In India where turmeric is widely used, the prevalence of four common U.S. cancers -- colon, breast, prostate and lung -- is 10 times lower. In fact, prostate cancer, which is the most frequently diagnosed cancer in U.S. men, is rare in India and this is attributed, in part, to turmeric. Numerous studies have looked into this potential cancer-fighting link, with promising results. For instance, curcumin has been found to:

- inhibit the proliferation of tumor cells;
- inhibit the transformation of cells from normal to tumor;
- help your body destroy mutated cancer cells so they cannot spread throughout your body;
- decrease inflammation;
- enhance liver function;
- inhibit the synthesis of a protein thought to be instrumental in tumor formation; and
- prevent the development of additional blood supply necessary for cancer cell growth.

As for the results of research studies, a study in *Biochemical Pharmacology* found that curcumin can slow the spread of breast cancer cells to the lungs in mice.[4] "*Curcumin acts against transcription factors, which are like a master switch,*" said lead researcher, Bharat Aggarwal. "*Transcription factors regulate all the genes needed for tumors to form. When we turn them off, we shut down some genes that are involved in the growth and invasion of cancer cells.*" A second study in *Biochemical Pharmacology* also found that curcumin inhibits the activation of NF-kappaB, a regulatory molecule that signals genes to produce a slew of inflammatory molecules (including TNF, COX-2 and IL-6) that promote cancer cell growth.[5]

Turmeric's Essential Role for Your Liver

Your liver's primary role is to process and remove toxins carried in your bloodstream. When functioning at its peak, it can filter up to two liters of blood per minute and easily break apart toxic molecules to reduce their toxicity. Your liver is also a crucial part of vitamin, mineral, protein, fat, carbohydrate and hormonal metabolism. However, poor diet, allergens, pollution and stress can cause your liver to become sluggish, and this can impair its vital functions. This is

where turmeric can be a very useful part of your liver support system. Studies have shown that it:

- may increase important detoxification enzymes in your liver, and
- induces the formation of a primary liver detoxification enzyme, glutathione S-transferase (GST) enzymes.

Turmeric is also a natural cholagogue, a medicinal agent that promotes the discharge of bile from your system. Increased bile flow is important to help your liver detoxify and to help your body digest fats.

Turmeric for Your Heart, Brain and Overall Health

Turmeric inhibits free radical damage of fats, including cholesterol. When cholesterol is damaged in this way, or oxidized, it can then damage your blood vessels and lead to a heart attack or stroke. Therefore, research suggests that turmeric's ability to prevent the oxidation of cholesterol may be beneficial for your heart. It's also rich in vitamin B6, high intakes of which are associated with a reduced risk of heart disease.

Meanwhile, turmeric appears to be highly protective against neurodegenerative diseases. In fact, in India levels of neurological diseases such as Alzheimer's are very low, and studies have shown that curcumin can slow the progression of Alzheimer's in mice. The compound has also proven capable of blocking the progression of multiple sclerosis. Further, Professor Moolky Nagabhushan from the Loyola University Medical Center, Chicago, IL, who has been studying turmeric for the last 20 years, believes that turmeric can protect against harmful environmental chemicals, and in so doing protect against childhood leukemia. The research showed that curcumin in turmeric can:[7]

- inhibit the toxicity of polycyclic aromatic hydrocarbons (PAHs) (cancer-causing chemicals in the environment);
- inhibit radiation-induced chromosome damage;
- prevent the formation of harmful heterocyclic amines and nitroso compounds, which may result in the body when eating certain processed foods, such as processed meat products; and
- irreversibly inhibit the multiplication of leukemia cells in a cell culture.

Turmeric's volatile oils also have external anti-bacterial action. As such, they may help prevent bacterial wound infections and accelerate wound healing. Johnson & Johnson even sells a curcumin-containing Band-Aid in India! And the therapeutic potential of turmeric and curcumin do not end there. Evidence suggests the spice may also be beneficial for:

- cystic fibrosis,
- Type 2 diabetes,
- Crohn's disease,
- psoriasis,
- rheumatoid arthritis,
- cataracts,
- gallstones,
- muscle regeneration, an
- inflammatory bowel disease.

Which Type of Turmeric is Best?

For use in cooking, choose a pure turmeric powder, rather than a curry powder. At least one study has found that curry powders tend to contain very little curcumin, compared to turmeric powder. Turmeric is also available in supplement form and for many this is a more convenient method to obtain these health benefits discussed above, especially if they are from a high-quality organic source and if one doesn't particularly enjoy the taste of curry. On my recent trip to India I was able to find a company called Organic India that produces probably some of the best Indian herbs on the planet.

[1] The University of Texas MD Anderson Cancer Center, Complementary/Integrative Medicine Education Resources, "Curcumin at M.D. Anderson" (accessed January 22, 2009)

[2] The University of Texas MD Anderson Cancer Center, Complementary/Integrative Medicine Education Resources, "Curcumin at M.D. Anderson" (accessed January 22, 2009)

[3] The University of Texas MD Anderson Cancer Center, Complementary/Integrative Medicine Education Resources, "Curcumin at M.D. Anderson" (accessed January 22, 2009)

[4] Biochemical Pharmacology, Volume 70, Issue 5, 1 September 2005, Pages 700-713

[5] The World's Healthiest Foods, Turmeric

[6] The World's Healthiest Foods, Turmeric

[7] The World's Healthiest Foods, Turmeric