

[Boswell Relief™](#) and [SynoGlide II™](#) Both Contain the Indian Spice Turmeric

Turmeric May Help Prevent Alzheimer's and Parkinson's Diseases

An ancient remedy may enliven your brain as well as your food

The spice of life - how many times have you heard that term applied to something especially nice? It might be chocolate truffles, or the music of Mozart, or playing with children. Part of the spice of life, of course, is that there are so many different spices to choose from, both figuratively and literally. On the literal side, there are food spices galore in many parts of the world, especially Southeast Asia, which is particularly rich in these botanical treasures. One of them, **turmeric**, has actually been called "the spice of life" since ancient times.¹

Southeast Asia is the fabled source of the spices that Marco Polo and those who followed him brought back to Europe to enliven the dull fare that had been eaten there for millennia (they didn't even have pizza, if you can imagine that). The people of Europe - the wealthy ones, anyway - became wildly enamored of spices, which were more highly prized than gold and jewels for as long as they remained rare. Eventually they flooded the market and were joyfully embraced by everyone.

Turmeric's anti-inflammatory properties have aroused great interest, as well as its effects on cholesterol and cancer.

How fortunate for the people of India, China, and other countries in that region of the world that they had always been able to enjoy these spices - often at blast-furnace intensity - with their daily meals. The spices were, and are, undeniably pleasant in their own right as sources of flavor and zest, but they often served other, more practical, purposes as well: to mask the odor and taste of rancid meat and to inhibit further spoilage (these were vital factors in Europe as well, before the advent of refrigeration). One did what one could to survive.

Does Curry Prevent Alzheimer's Disease?

Life, though, is about health and happiness, not just survival. If spices make us happy, do they also help our health? Yes indeed. Scientists continue to learn more and more about the health benefits of various spices and herbs, whose exotic chemical constituents can affect many aspects of our physiology beyond our taste buds. First there is gastrointestinal function, because everything we eat goes directly to the stomach. But if some of those spicy compounds pass from the intestines into the bloodstream, the entire body becomes their laboratory, so to speak - including, of course, the brain.



Marco Polo brought turmeric to Europe.

Consider this: elderly (aged 70-79) residents of rural India, who eat large amounts of curry, appear to have the lowest incidence of Alzheimer's disease in the world: 4.4 times lower than that of Americans.² Does that mean that curry helps prevent Alzheimer's? Perhaps, but it's impossible to say, because innumerable other factors (dietary, genetic, social, economic, lifestyle-related, etc.) would have to be taken into account, and systematically ruled out, before any such conclusion could be drawn. But the correlation is suggestive, and there are scientific reasons for believing that there may indeed be a real effect there.

The Key Component of Curry Is Turmeric

Curry, perhaps the quintessential Asian spice, is a pungent seasoning prepared from cumin, coriander, turmeric, and other spices native to that continent. Not surprisingly, there are countless variations on the curry theme, depending on who is preparing it. It is the turmeric in curry that has attracted the attention of scientists, in part because turmeric has a long history of medicinal use in India, particularly in the traditional medical philosophy known as Ayurveda.

The turmeric plant (*Curcuma longa*, also known as *Curcuma domestica*) is a member of the ginger family. It has yellow flowers and aromatic, somewhat fleshy rhizomes (see Figure 1) that, when dried, yield a bright yellow powder commonly used as a spice or coloring agent - sometimes both, as in certain yellow mustards. As a spice, turmeric serves not only to jazz up the food but also to help protect it from spoilage and protect its nutritive value, because it contains potent antioxidant chemicals whose action inhibits the oxidative degradation of foodstuffs.



Figure 1. *The fleshy rhizomes of turmeric (Curcuma longa), from which the yellow spice is extracted. Rhizomes, a kind of horizontal, underground stem, often send out roots and shoots from their nodes. They are also called rootstalks or rootstocks.*

Can Turmeric Protect Us from Oxidative Degradation?

If turmeric can protect foodstuffs from oxidative degradation, can it do the same, more or less, for our bodies, which are composed entirely of *former* foodstuffs? When it comes to meat, in particular, isn't there really relatively little difference between a piece of beef and us, biochemically speaking? The answer to both questions is yes. Most of the antioxidative chemical reactions that can protect a piece of beef from spoiling can also protect our tissues from spoiling, so to speak.

The chemical compounds in turmeric that are primarily responsible for its antioxidant action are *curcumin* and several related compounds called *curcuminoids* (no, they're not related to cucumbers, despite the oddly similar names). They belong to a broad class of compounds called polyphenols, many of which have been found to have major health benefits in humans.

Turmeric, the "Multi-Anti" Spice

In herbal medicine, turmeric (in the form of an extract of *Curcuma longa*) has been found to have the following effects:³

- *Antihepatotoxic* - it has a protective effect on the liver
- *Antihyperlipidemic* - it inhibits the excessive buildup of lipids (fatty substances, such as cholesterol) in the blood
- *Anti-inflammatory* - it reduces inflammation
- *Antioxidant* - it scavenges free radicals and inhibits lipid peroxide formation, especially in the liver
- *Antitumoral* - it inhibits the formation of tumors, including cancerous ones
- *Antimicrobial* - it inhibits the action of microorganisms such as bacteria
- *Antifertile* - it has a contraceptive effect
- *Anti-insect* - that's right, it acts as an insect repellent, a bonus

Turmeric Has Many Uses As an Anti-Inflammatory

Among the many conditions for which turmeric is sometimes used (but note that these are unproven uses by modern medical standards) are gastrointestinal problems (dyspepsia, upper abdominal pain, bloating, colic, flatulence, and diarrhea), intermittent fever, edema (swelling), bronchitis, colds, worms, leprosy, kidney inflammation, cystitis (inflammation of the urinary bladder), headaches, chest infections, and amenorrhea (the abnormal suppression or absence of menstruation). Externally, it is used for bruising, leech bites, festering eye infections, inflammation of the oral mucosa, inflammatory skin conditions, and infected wounds.³

How many of these uses are legitimate, even if unproven, and how many are based on nothing more substantial than wishful thinking and the placebo effect? Who knows? Our scientific (as opposed to folkloric) knowledge of herbal medicine is still immature, with vast areas yet to be explored before we can be certain of what really works and what does not, and why.

Curcumin is several times more potent than vitamin E as an antioxidant, and it protects the brain from lipid peroxidation.

But there are valuable clues along the way, such as recurrent patterns of effect. The perceptive reader (that's you - wake up!) will have noticed, for example, that a particular concept kept cropping up in the description given above: *inflammation*. Aha! Maybe we're on to something here. Indeed, it is the anti-inflammatory properties of turmeric that have aroused the greatest interest in the medical community, although its ability to lower blood cholesterol is also recognized, as well as its anticancer effects in laboratory animals and humans.^{1,4}

Ordinary Anti-Inflammatories Protect Against Alzheimer's Disease

Among the most prevalent kinds of inflammation is that of arthritis, and turmeric is widely used to ease the pain of this disease, in both of its major forms: osteoarthritis and rheumatoid arthritis. Inflammation takes many forms, however, and it can occur in many places throughout the body. One such place is the brain, where Alzheimer's disease becomes manifest, in part, through the formation of a kind of plaque called *amyloid*. This is a hard, waxy deposit, consisting of proteins and polysaccharides, that results from the degeneration of tissue. Turmeric has been found to be helpful here too. Let's see how and why it came to be studied for this purpose.

Accompanying the formation of amyloid is chronic inflammation of the affected tissues, and among the most common treatments for inflammation in general is the use of NSAIDs (nonsteroidal anti-inflammatory drugs), such as the over-the-counter medications aspirin and ibuprofen. A recent study has found that adults who took NSAIDs for at least two years had a dramatically reduced risk (80% lower!) for Alzheimer's disease than those who used these drugs for shorter periods or who did not take them at all.⁵ Furthermore, research has shown that chronic treatment with ibuprofen suppresses inflammation and the development of amyloid in a special strain of "transgenic" mice whose DNA was augmented with a human Alzheimer's gene.⁶ In other words, ibuprofen gives some protection to mice that are predisposed to develop Alzheimer's disease.

Curcumin: An Extraordinary Anti-Inflammatory Is Better

All this would be great, except for one huge drawback: the chronic use of conventional NSAIDs such as ibuprofen carries a high risk of severe irritation or ulceration of the stomach, as well as occasional kidney or liver damage. Because of that, researchers have sought other strategies for preventing Alzheimer's. It is known that the disease is associated with significant oxidative damage caused by free radicals, and laboratory studies have shown that antioxidants can protect neurons (brain cells) from the ravages of amyloid. So it made sense to try a well-known antioxidant, such as vitamin E, to see if it could slow down the development of the disease.

Vitamin E, however, turned out not to be the right kind of antioxidant for the job, mainly because it is a poor scavenger of nitric oxide-based free radicals produced during inflammation. (Nitric oxide is itself a free radical, and although it serves a number of vital functions in the body, it can be harmful under the wrong circumstances.) So other researchers (at UCLA) looked for a powerful antioxidant of the *right* kind, and found curcumin, the main active ingredient in turmeric. Curcumin is several times more potent than vitamin E as an antioxidant,⁷ and it is known to protect the brain from lipid peroxidation⁸ and to scavenge nitric oxide-based free radicals.⁹ It is also known to be nontoxic and virtually free of side effects.⁴

Curcumin Is Effective in Several Ways

The UCLA researchers undertook to study the effect of curcumin on the combined oxidative and inflammatory damage that occurs as a response to amyloid formation in those transgenic, Alzheimer's-predisposed mice. When they become old and develop Alzheimer's, the poor little critters display symptoms of age-related nerve-cell damage caused by amyloid plaque, a quantifiable inflammatory response, oxidative damage, and age-related memory deficits linked to defective long-term memory.

In the study, the mice were tested with both low and high doses of dietary curcumin to determine its effect on inflammation, oxidative damage, and plaque pathology. Both the low and high doses of curcumin were found to suppress inflammation and oxidative damage significantly, as evidenced by microscopic and biochemical analyses of specific sections of the mouse brains; the biochemical tests focused on certain molecules whose levels are sensitive indicators of the conditions in question. The effect of curcumin on amyloid was different, however: the plaque formation was significantly reduced by the low dose but not by the high dose (which was 31 times greater than the low dose), indicating yet again that more is not always better - or even as good.

Curcumin May Prevent Alzheimer's and Parkinson's Diseases

The researchers noted that both Alzheimer's disease and Parkinson's disease are linked to increased oxidative damage to the brain, including nitric oxide-based damage to a specific protein called synuclein.¹⁰ They speculated that curcumin may effectively inhibit this type of damage and that its apparent ability to target several different mechanisms implicated in the development of Alzheimer's disease may make it a more effective agent than more potent but more specific inhibitors of any of the individual mechanisms.

The researchers concluded by saying,

Hence, curcumin is not only efficacious at multiple levels but may have fewer side effects and toxicity than many other NSAIDs, including ibuprofen. Together, the multiple beneficial effects of curcumin make it a promising agent for controlled clinical trials to establish its safety and efficacy as a chronic antioxidant and NSAID prophylactic for prevention or treatment of Alzheimer's and possibly other neurodegenerative diseases of aging, such as Parkinson's disease.

"Chronic antioxidant" means an antioxidant that would be taken chronically, i.e., regularly for a long period of time. And curcumin is referred to here as an NSAID because it *is* one: it's nonsteroidal, it's anti-inflammatory, and it's a drug - well, sort of, in the same sense that other nonprescription agents such as aspirin and ibuprofen are "drugs."

Add Some Spice to Your Life

To obtain turmeric and the beneficial natural curcuminoids it contains, you could eat curry every day, or you could take [Boswell Relief](#), a product introduced in last month's issue of *Life Enhancement*. Boswell Relief contains generous, scientifically validated amounts of the ancient Ayurvedic agent turmeric, *Curcuma longa*, in addition to its namesake ingredient, the potent natural anti-inflammatory agent *Boswellia serrata* (another good NSAID). Commonly known as frankincense and also used in Ayurvedic medicine for many centuries, *Boswellia* has been shown in both animal and human studies to help with health problems such as arthritis, inflammatory bowel disease, and bronchial asthma.

You will also find Curcuma and Boswellia in Life Enhancement's premium product for joint support, [SynoGlide II](#). Also present in this full-spectrum formulation are glucosamine sulfate, N-acetylglucosamine, chondroitin-4,6-sulfates, the enzymes bromelain, papain, and trypsin, the anti-inflammatory neurosteroid pregnenolone, and the mineral molybdenum.

Together, *Curcuma* and *Boswellia* provide health benefits that, as we have seen, may include support for mental as well as physical function. Combined in Boswell Relief and SynoGlide II, they bring an honored healing tradition into modern times and add, literally, a bit of spice to your life.

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