

[Turmeric + Black Pepper good, but messy eaters beware](#)

Posted by Mathy Kandasamy | Filed under [General](#), [Archives](#)

From Montreal Gazette

It fights arthritis! It fights breast cancer! It fights prostate cancer! It fights colon cancer! It even fights Alzheimer's disease! Sounds like the usual hype for some dietary supplement scam, right?

Actually these claims are being made on behalf of a substance that is readily available in any grocery store. And the claims are not being made by some huckster. They are being made by reputable scientists. But they are careful to point out that so far most of the evidence comes from studies carried out on rodents, not humans. So what is this "hot" substance? Turmeric! That's the yellow spice used to add an intriguing flavour to many dishes, curries in particular.

Turmeric is the ground up root of an east Indian plant (*Curcuma longa*) belonging to the ginger family. It usually makes up about 20 to 30 per cent of curry powders, with other spices such as coriander, ginger, chili, black pepper, cumin, mustard, fennel and cardamom contributing the rest. But our focus here is not on turmeric's flavour, it is on its potential health effects, some of which were already described thousands of years ago in India's ancient Ayurvedic system of medicine.

Turmeric was said to be good for stomach ailments, wound healing and "blood cleansing." Today in India the spice is used as a household remedy for sprains and swellings, the same sort of problems for which we would use aspirin or some other non-steroidal anti-inflammatory drug (NSAID). Could there be something in turmeric that has similar activity?

Modern research has identified curcumin, a compound that makes up about 10 per cent of turmeric by weight as the most likely candidate for health benefits. In laboratory studies curcumin inhibits the action of the cyclooxygenase-2 enzyme (COX-2), an enzyme that catalyzes the formation of pro-inflammatory prostaglandins. And guess what other chemicals inhibit this enzyme? The non-steroidal anti-inflammatories, including aspirin! It seems then that these drugs and curcumin have a common mode of action. But curcumin may even add another facet to the treatment of inflammation. In addition to its COX-2 inhibiting effect, turmeric also interferes with the production of a protein called NF-B, known to stimulate specific genes that code for inflammatory substances. Given all of this, we shouldn't be too surprised that researchers at the University of Arizona have shown that turmeric can prevent joint inflammation in rats. A controlled trial with humans using standardized doses of curcumin is sorely needed.

The use of aspirin and NSAIDS has also been linked with a reduced risk of colon cancer, but the risks associated with these drugs, particularly gastric bleeds, preclude their use for protection against the disease. Could curcumin offer safer protection? Possibly. Epidemiologists have noted that in India where the population consumes an average of about 2-3 grams of turmeric a day (200-300 milligrams of curcumin), the incidence of colon cancer is roughly one eighth of that the west.

And this may be more than a chance association, at least according to a small clinical trial at Johns Hopkins School of Medicine. Five patients who had a history of precancerous polyps in their colon were treated with 480 milligrams of curcumin and 20 milligrams of quercetin three times a day. Quercetin is an antioxidant found commonly in apples, onions, tea and citrus fruits that has also been associated with a reduced risk of colon cancer. After six months of treatment, all five patients had fewer and smaller polyps.

While the amount of quercetin used is readily available in the diet, the curcumin far exceeds the dose that could be provided by any curry. Still, this small study does lend support to the idea that curcumin when consumed regularly may be effective in preventing colon cancer.

Since Indians have one quarter our breast cancer rate and one twentieth of our prostate cancer rate, researchers have cast a hopeful eye towards turmeric here as well. Bharat Aggarwal of the M.D. Anderson Cancer Centre in Houston, perhaps the world's leading authority on turmeric, injected mice with human breast cancer cells taken from a patient whose disease had spread to the lungs.

The mice developed tumours, which were surgically removed to simulate a mastectomy. Some of the animals were then treated with curcumin, some with the widely used cancer drug paclitaxel (Taxol), some with a combination of the two, and some received no treatment. The most effective treatment was the combination, with only 22 per cent of the mice developing lung cancer. Curcumin alone was more effective than paclitaxel alone.

Researchers at Rutgers University have found similar results for prostate cancer induced in mice, this time studying the effects of curcumin and phenethyl isothiocyanate (PEITC), an anti-cancer compound in "cruciferous" vegetables such as broccoli, cauliflower and cabbage. The mice were injected three times a week for four weeks, with the strongest tumour retarding effects being found for the combination of curcumin and PEITC. Again, while it is hard to interpret such experiments in human terms, the study supports the regular consumption of the cruciferous vegetables along with turmeric.

Such a diet may even help prevent the buildup of amyloid plaque in the brain, a hallmark of Alzheimer's disease. Curcumin-fed rats produce less plaque after

receiving beta amyloid injections in the brain than rats on a normal diet. If you have trouble remembering all this, maybe you could use a little help from turmeric. The curcumin-fed rats outperformed other rats in maze-based memory tests.

At this point, there isn't enough known about the effects of turmeric to make a recommendation about consuming specific amounts, but adding turmeric-flavoured vegetarian dishes to the diet is surely a good idea. And don't forget to add some pepper. It increases curcumin absorption a thousand fold!

But don't be messy. One thing I can guarantee about turmeric, is that it makes for a stain that defies all cleaning techniques known to mankind.

Joe Schwarcz is director of McGill University's Office for Science and Society (www.OSS.McGill.ca).

He can be heard every Sunday from 3-4 p.m. on CJAD.

joe.schwarcz@mcgill.ca

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Groundbreaking Study Finds Turmeric Extract Superior to Prozac for Depression

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By [Sayer Ji](#)

Contributing Writer for [Wake Up World](#)

A new study published in the journal *Phytotherapy Research* has confirmed for the first time in a randomized, controlled clinical trial that the primary polyphenol in turmeric – known as curcumin – is both safe and effective in treating serious states of depression.[1]

The research was performed at the Department of Pharmacology, Government Medical College, Bhavnagar, Gujarat, India, and involved patients already diagnosed with major depressive disorder (MDD). The objective of the trial was to compare the efficacy and safety of curcumin with fluoxetine (Prozac) in 60 patients diagnosed with MDD. Subjects were randomized to receive either a six week treatment with fluoxetine (20 mg) and curcumin (1000 mg), individually or in combination.

Success of the treatment was evaluated using the 17-item [Hamilton Depression Rating Scale](#) (HAM-D₁₇). The results were reported as follows:

“We observed that curcumin was well tolerated by all the patients. The proportion of responders as measured by the HAM-D₁₇ scale was higher in the combination group (77.8%) than in the [fluoxetine](#) [Prozac] (64.7%) and the

curcumin (62.5%) groups; however, these data were not statistically significant (P = 0.58).

“Interestingly, the mean change in HAM-D₁₇ score at the end of six weeks was comparable in all three groups (P = 0.77). This study provides first clinical evidence that curcumin may be used as an effective and safe modality for treatment in patients with MDD without concurrent suicidal ideation or other psychotic disorders.”

Discussion

If the results of this relatively small trial are applicable to a wider population, this is truly groundbreaking news. There was already a rather sizable body of preclinical research indicating that curcumin is an effective antidepressant in the animal model,[2] but this was not enough to sway most physicians who practice so-called “evidence based medicine” into actually suggesting it to patients as a Prozac or antidepressant alternative.

And this is understandable, as the lack of solid human clinical evidence supporting the use of a natural substance is no small matter from a legal-regulatory perspective. Unless a substance has passed through the approximately 800 million dollar financial gauntlet of phase I, II, and III clinical trials required to apply for FDA drug approval, and has actually received that approval, there is [scant legal protection for those who use natural medicines](#) to prevent or treat disease, and who might face a lawsuit (frivolous or genuine) as a result of a claim of injury.

Curcumin, of course, is extremely safe, with a 2010 phase I safety study finding that oral doses as high as 8 grams a day were well tolerated.[3] Fluoxetine, on the other hand, is highly controversial due to its well-known toxicity, and its laundry list of side effects, which include suicidal ideation (not a good side effect for someone already depressed!).

Also, even though it would appear the study found that curcumin and Prozac were equivalent in effectiveness, the fact that curcumin comes “... *without concurrent suicidal ideation or other psychotic disorders,*” clearly proves its superiority over Prozac. There are also a wide range of additional side benefits that come with using curcumin, including its powerful neuroprotective properties. You will find no less than 109 studies on GreenMedInfo’s database documenting curcumin’s ability to protect, and in some cases restore brain function. [see research here: [curcumin's neuroprotective properties](#)]

Studies like this are greatly encouraging as they confirm the timeless wisdom of plant, mineral and nutrient-based medical interventions which were once the norm before pharmaceutical medicine, only recently, attempted to dominate the spectrum of alternatives available to the public.

Some final details that may be of assistance are: (1) curcumin is approximately 3-4% of the whole root powder by weight. (2) curcumin is poorly bioavailable, as it

is alcohol and not water or fat soluble, so must be taken in higher quantities, or in combination with either carrier molecules such as the phospholipid phosphatidyl choline or bioavailability enhancers such as black pepper, or the primary compound responsible for increased absorption in [black pepper](#): piperine.

For additional information on the topics covered here read: [600 Reasons Turmeric May Be The World's Most Important Herb](#)

[1] Jayesh Sanmukhani, Vimal Satodia, Jaladhi Trivedi, Tejas Patel, Deepak Tiwari, Bharat Panchal, Ajay Goel, Chandra Bhanu Tripathi. **Efficacy and Safety of Curcumin in Major Depressive Disorder: A Randomized Controlled Trial.** *Phytother Res.* 2013 Jul 6. Epub 2013 Jul 6. PMID: [23832433](#)

[2] GreenMedInfo.com, [Animal Research on Curcumin's Anti-Depressive Properties](#)

[3] Masashi Kanai, Kenichi Yoshimura, Masanori Asada, Atsushi Imaizumi, Chihiro Suzuki, Shigemi Matsumoto, Takafumi Nishimura, Yukiko Mori, Toshihiko Masui, Yoshiya Kawaguchi, Kazuhiro Yanagihara, Shujiro Yazumi, Tsutomu Chiba, Sushovan Guha, Bharat B Aggarwal. **A phase I/II study of gemcitabine-based chemotherapy plus curcumin for patients with gemcitabine-resistant pancreatic cancer.** *Cancer Chemother Pharmacol.* 2010 Sep 22. Epub 2010 Sep 22. PMID: [20859741](#)