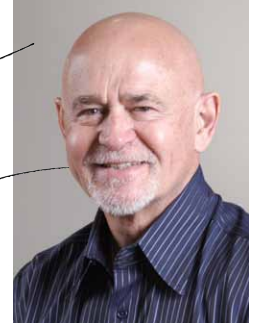


The Healing Power of Curcumin

I'm excited to write this column because what I'm about to share with you is so amazing and almost unbelievable even for me. If you haven't heard of curcumin, I think what you are about to learn will amaze you as it has me. Curcumin parallels with many of the past discoveries that have changed the world. Why is curcumin attracting so much attention by scientists around the world? That's what I wanted to learn for myself. I have been researching and studying the clinical data on curcumin for the last several years. I have experienced, and know many other people who have as well, the benefits of curcumin for pain and inflammation. I wanted to learn first hand so I contacted some of the top scientists in the world and began a communication with them regarding the science of curcumin. In December of 2007, they invited

me to attend a conference on curcumin (turmeric) in Delhi, India that was to be held in February 2008. So in February, my wife Debra and I spent several weeks in India. Part of the trip was to visit the totally undeveloped fertile soil of India just on the border of India and Nepal. 95% of the turmeric is grown in this area since the climate, soil and elevation is ideal to grow turmeric which has a 6-8% level of curcumin where most turmeric is around 2-3%. Just a few passionate scientists (and me) have been selected to research this extremely high quality curcumin. The farmers from the nearby village who are trying to raise their economy have agreed to develop a co-op and a 51% ownership of each annual crop. These farmers will now be paid a fair trade price with remaining profits being available for

To your good health,
Terry... Naturally

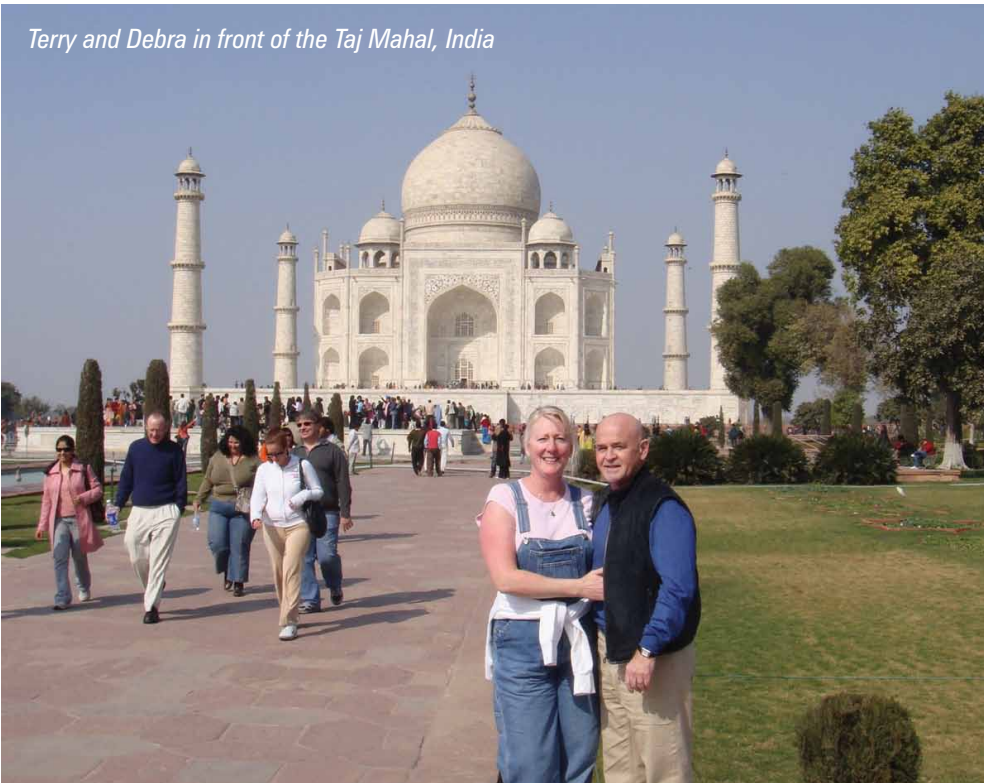



a hospital and school. We had the opportunity to visit, eat and share our dreams with the villagers. Some could speak a little English. Others spoke a dialect of Indian that even our Indian interpreter could not understand.

There are 24 different Indian dialects spoken in India. The farmers that we spent time with care, feed and clothe their families on an annual income of \$100.00. After 10 airflights and hundreds of miles by Jeep, we toured thousands of hectares of turmeric, green tea, banana, coconut and Indian gooseberry plantations. After 10 days we made our way back to Delhi to attend the scientific conference on turmeric (curcumin). Two medical doctors and a former Pfizer PhD conducted the seminar on the healing benefits of curcumin which they entitled the **"The All in One Solution"**. I will now share with you the contents of my notes from the trip.

Research on curcumin is exploding with more than 2,000 scientific reports currently available and 688 studies done in just the

Terry and Debra in front of the Taj Mahal, India



When in doubt, always consult your physician or health care practitioner. This column is to provide you with information to maintain your health.

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last 4 years. This is because of an extremely wide range of biological activities exhibited by curcumin. Curcumin, containing over 100 unique molecules, acts at multiple targets and at multiple levels. Curcumin is fast emerging as a cure-all for valid reasons. Curcumin has demonstrated healing benefits for most if not all chronic diseases afflicting mankind. It is an antioxidant many times more potent than vitamins E and C. It is a complete anti-inflammatory equivalent to cortisone and other pain relieving drugs without the major side effects. It is a modulating agent involved in the complex process of inflammation at all levels. In heart disease, curcumin can affect all the steps believed to be involved in the pathologic process of atherosclerosis.



In diabetes it can potentially reverse insulin resistance, the first clinically relevant stage of the disease. It can synthesize insulin similar to diabetic drugs that are currently used for this purpose. Curcumin can be shown to be the only

agent that can effectively address all the multiple factors in Alzheimer's disease and rheumatoid arthritis. As a cancer agent, it is chemopreventative and chemotherapeutic. It can stop the spread of cancer growths, causes apoptosis of malignant cells (death of cells) by more than one mechanism, and prevents angiogenesis (the spreading of cancer) and metastasis (how a cancerous tumor can spread through the body). Whereas the present day cancer drugs are specific for one type of cancer, curcumin has been shown in preclinical studies to be effective for virtually all forms of human cancers. While common chemotherapeutic drugs cause serious side effects, curcumin produces none. Common anticancer drugs are immunosuppressive. Curcumin is

an immunorestorer. Furthermore, the common anticancer drugs cannot cross the blood brain barrier. Curcumin can. Curcumin exhibits activities similar to recently discovered drugs such as TNF inhibitors (Humira, Remicade and Enbrel), a vascular and endothelial cell growth factor (VEGF) blocker (Avastin), human epidermal growth factor receptor (EGFR), inhibitors (Erbixux, Erlotinib and Gefitinib), and the HER2 blocker (Herceptin) minus their toxic side effects. In a host of studies, MD Anderson Hospital researchers have reported that curcumin has

potent anticancer properties. They say it may prove effective for both prevention and treatment. "Curcumins' promise is enormous", said Dr. Bharat Aggarwal, a professor of cancer medicine in MD Anderson Hospital in Houston, Texas. Dr. Kurzrock, also of MD Anderson Hospital, was extremely impressed with the cancer research. "It was clear that this agent (curcumin) was just as potent at killing tumor cells in the lab as any experiment drug as I'd seen from pharmaceutical companies."

How and Why Curcumin Works

The unusually high biological activity profile of curcumin arises from its unique combination of a powerful antioxidant and anti-inflammatory. These two activities are complimentary in all levels of disease therapy. Modern drugs fall awfully short of this requirement. Curcumin's ability to work on so many different pathways with its antioxidant and anti-inflammatory properties can affect almost every known disease in a positive manner. In analysis of the 2,000 studies done as of today, curcumin has positive healing benefits for the following diseases: All cancers, particularly

Terry recommends this formula at your local health food store:

Proprietary Complex 750 mg
Curcumin CRX 791 Micronized (*Curcuma longa*) Rhizome Extract, phospholipids, turmeric essential oil

Proprietary Complex 375 mg
Curcumin CRX 791 Micronized (*Curcuma longa*) Rhizome Extract, phospholipids, turmeric essential oil

prostate, colon, lung, breast, pancreatic, skin and leukemia's; heart disease, diabetes, asthma, COPD, psoriasis, Alzheimer's disease on all levels of its progression, rheumatoid arthritis, inflammatory bowel disease, allergies and Parkinson's disease.

Does this sound too good to be true?

Not from what I have learned over the last several years and absolutely confirmed by the scientific seminar that Debra and I attended in Delhi India. As mentioned above, curcumin contains 112 known molecules and probably several hundred more. Most chronic diseases are multifactorial and a disease modifying drug should address all these simultaneously. Modern drugs can target only one of such factors, and therefore, doctors have to rely on polypharmacy (several prescriptions) and that's the rule rather than the exception. For example, current practice guidelines recommend the routine use of several cardiac medications in hospital survivors of acute coronary infarction. Aspirin, alpha blockers, angiotensin converting enzyme (ACE) inhibitors and lipid lowering drugs (statins) are routinely administered in such patients. In the year 2005 only 58% survived this therapy. While all drugs are studied extensively, there have been no studies to prove their safety when used in a combination with other drugs. When several drugs are used together there could be an increase of toxicity just waiting to happen. Curcumin has been found beneficial in so many disease conditions because of its ability to act at multiple targets and at multiple levels. It would be safe to say that curcumin

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— Dr. Bharat Aggarwal



(turmeric), a food that has been consumed for 5,000 years, has the greatest effect on overall health than any other known natural substance based on the clinical studies to date. An important aspect of the usefulness of curcumin in all these applications is its complete safety and non-toxic nature.

Nothing is Perfect

The dark side of the curcumin story is its poor systemic availability due to poor absorption from the intestines and rapid metabolism of the compound in the body. This has largely curtailed its progress from the lab to the clinic. No clinical trials have progressed beyond the Phase I stage. All these have led to the general impression that curcumin's benefits are largely unrealized in the human body. From the daily consumption of turmeric by the Indian culture for 5,000 years has shown their rate of disease is many times lower than in western cultures which led researchers to begin their studies on curcumin, the active component of tur-

meric. The next step by scientists was to discover a method to increase the absorption of curcumin. This has been the only negative or dark side of the research surrounding curcumin until now. Curcumin has a powerful effect throughout the stomach and intestinal tract because it works similar to a band-aid. It has direct contact to the inflamed and irritated tissues so it has been extremely effective in Crohn's disease, colitis, irritable bowel and ulcers. Researchers hypothesized that curcumin could be one of the most powerful, chemopreventative and chemotherapeutic compounds. Increasing the absorption of curcumin so that it would reach the cellular level throughout the body became a major priority by researchers in India.

Making Curcumin Perfect

There are numerous studies confirming that curcumin has an amazing range of bioactivity against a wide range of illnesses. Many studies have also demon-

strated that curcumin is safe even at very high dosages. So what's the problem? As it turns out, curcumin isn't rapidly absorbed in the human body, which makes bioavailability an issue.

For example, I have described how cellular studies have clearly shown that curcumin can directly kill cancer cells. However, if curcumin can't do that in the human body, we have a substance that is virtually useless. Bioavailability has been the key obstacle to performing human clinical trials. We really need more human clinical trials if something is to have broad appeal and help a wide range of people.

An interesting part of the curcumin story is that animal studies show desired results even at small dosages. This is because there are major differences between animals and humans in the metabolism of many substances. Therefore, the question of curcumin absorption remains unclear.

There is no denying that considerable metabolism of curcumin occurs in the body after ingestion. There have been some attempts to increase curcumin's bioavailability. Some researchers have isolated curcumin analogs or sub-particles, such as demethoxycurcumin. However, in most cases, the entire curcumin molecule with its 100-plus known constituents is proving to be more active.

Some researchers have found that blending piperine with curcumin has increased absorption. However, a more effective method has been discovered in India and is now available in the United States.

Through a proprietary patented process, researchers have bound curcumin to phospholipids blended with turmeric essential oil and then micronized which creates a curcumin that is not only better absorbed but is absorbed 8-10X (times) more effectively than curcumin 95%. This curcumin extract known simply as CRX 791 has also been shown to be 7X (times) stronger than the curcumin piperine combination. It's true that the sum is greater than the individual parts. Researchers at the M.D. Anderson Hospital in Houston, Texas have experimented with a dosage of 8-12 grams of curcumin 95% for a variety of diseases. This requires the subject to take 16-24, 500 mg capsules. The new CRX 791 with its 10 X potency delivers the equivalent of 4,000 mg per a 500 mg capsule, or the equivalent of 85,000 mg of turmeric or approximately 3 ounces, therefore, reducing the dosage to 1-3, 500 mg capsules to obtain the same level of curcumin systemically. This is a huge scientific discovery in the delivery of curcumin.

What to Look For

With 40 years of experience in the health food industry, I have had the privilege to develop more than 300 nutritional formulations. With any nutritional substance, quality and absorption are the only factors that make a difference between a highly effective formulation as opposed to one that wastes time and money and jeopardizes your health. This new form of micronized curcumin with essential turmeric oil and bound to phospholipids will now allow scientists

and physicians to have a curcumin extract that will have the highest medicinal value. The most effective way to alleviate pain and inflammation is to combine curcumin with boswellia, another powerful anti-inflammatory Indian herb. This should also be combined with dl-Phenylalanine (DLPA) for its feel good antidepressive and pain relieving effects with its enhanced endorphin activity. Nattokinase is also important because it improves blood flow to the inflamed areas and reduces the possibility of blood clots.

Terry's Comment

"It's obvious that I believe a concentrated curcumin extract can help alleviate suffering and prevent illness. I believe it will be one of the most significant natural healing discoveries of our time, but this is not to say that this is the magic bullet for which we have longed for. Curcumin must be used responsibly as a supplement to a healthy diet, health promoting lifestyle and a quality dietary supplement program. As part of this potent wellness plan, curcumin can provide powerful support to anyone desiring optimal health."

For additional information on Curcumin, please refer to my new booklet, *Inflammation, the Wonder Spice Solution*, available in health food stores or www.Curamin.com. TM

All ingredients established in human studies for safety and effectiveness. Does not interfere with stomach, liver or kidney function.