ALIVE!

TURMERIC—ONE WHO IS VICTORIOUS OVER DISEASE

DID YOU KNOW THAT an estimated 80% of the world's inhabitants rely on traditional therapies that have been used for thousands of years? Anciently, turmeric was used in places like China and India to aid digestion, improve liver function, treat arthritis pain, heartburn, stomach ulcers, inflammation, and cancer. Turmeric has been applied directly to the skin as a healing salve for eczema, small pox, shingles, and wounds. But does turmeric have actual medicinal legitimacy? Does it have any proven effects on specific disease processes? From the research that I have been exposed to, I would say turmeric is living up to one of its traditional Indian nicknames: *one who is victorious over disease*.

Turmeric is a shrub-like tropical plant that grows about three feet tall. It bears a lovely pink-hued flower, but it is the finger-like underground stems, or rhizomes, that are so highly valued. If not used fresh, the stems are boiled, dried, and ground into a deep orange-yellow spice. Turmeric, commonly used in curries and savory dishes, is a relative to other flavorful rhizomes such as ginger and galangal root. Although turmeric contains hundreds of unique components, research seems to have focused on the one responsible for its deep color: curcumin.

CANCER

I recently heard Sahdeo Prasad, PhD speak on the research he and his team have conducted to investigate the potential chemo-preventive and chemotherapeutic agents in natural products. His lecture highlighted his research on a proinflammatory substance made in the body called NF-kappa B (NF-kB). NF-kB turns on inflammation, regulates over 500 genes, and plays a significant role in the genesis of tumors, increasing the growth of cancer cells. Curcumin was found to significantly decrease activation of NF-kB, decreasing cancer cell proliferation and metastasis. Prasad described curcumin as multi-targeting, meaning that it affects multiple aspects of cancer progression. In other words, the suppression of NF-kB is just one way curcumin is potentially effective in fighting cancer.

A study performed on mice illustrates the multi-targeting ability of curcumin. A diet high in saturated fat has been implicated as a significant risk factor for colon cancer. In this study, mice were divided into three groups. Group one was fed a diet containing 35 percent pork fat, 33 percent sugar, and a protein/vitamin/mineral mixture. Group two was fed the same diet but curcumin was added. These two groups were compared with a third group of mice that ate standard chow. After three months, the mice in group one had a 23 percent increase in polyp development compared to those eating the chow. This was significant because most colon cancers develop from polyps. In group two, it was observed that ingesting curcumin prevented the development of polyps even though the mice were eating the high-fat diet. Curcumin also enhanced cancer cell death and DNA repair. It also prevented the weight gain that was seen in the mice who were fed only the high fat diet¹ Studies on humans have also revealed that curcumin inhibits the growth of polyps.

ARTHRITIS

As an anti-inflammatory agent, turmeric can benefit the body in countless ways. When we think of inflammation in the body, often the first thing we think of is painful joints—arthritis.

Rheumatoid arthritis (RA) is a chronic, progressive destruction of cartilage and ultimately bone in the joints. This condition is disabling and painful. In one study, 45 patients with RA were randomized into three groups. One group took curcumin, the second group took a pharmaceutical drug, and the third group took both curcumin and the drug. All three groups improved, but those taking curcumin improved significantly more than the drug group.² In another study, rheumatoid arthritis patients were given 500 mg of curcumin for eight weeks. By the end of the study, blood levels of inflammatory markers had decreased dramatically.³

Osteoarthritis has also become widespread. This active joint disease includes inflammation and cartilage loss. Clinical trials have demonstrated that patients with osteoarthritis "showed improvement in pain, physical function, and quality of life after taking curcumin. They also reported reduced concomitant usage of analgesics and side effects during treatment."⁴

One hundred seven patients with osteoarthritis in their knees were randomized to receive either 800 mg of ibuprofen or two grams of curcumin extract daily for six weeks. The group who took just curcumin reportedly did as well as those on ibuprofen.⁵

review: "Curcumin is a highly potent antimicrobial agent and has been shown to be active against various chronic diseases including various types of cancers, diabetes, obesity, cardiovascular, pulmonary, neurological and autoimmune diseases. Furthermore, this compound has also been shown to be synergistic with other nutraceuticals such as resveratrol, piperine, catechins, quercetin and genistein. To date, over 100 different clinical trials have been completed with curcumin, which clearly show its safety, tolerability, and its effectiveness against various chronic diseases in humans."⁶

Scripture assures us that there is not a sickness that Jesus cannot heal. It records that He went through towns and communities "healing every sickness and every disease among the people" (Matthew 9:35). "Bless the Lord, O my soul . . . who heals all your diseases" (Psalms 103:1, 3). To Him belongs the title *One who is victorious over disease*.

1. C. Pettan-Brewer, J. Morton, R. Mangalindan, W. Ladiges, "Curcumin suppresses intestinal polyps in APC Min mice fed a high fat diet," *Pathobiology of aging & age related diseases*, PubMed, National Center for Biotechnology Information, 2011, https://www.ncbi.nlm.nih.gov/pubmed/22953026.

2. B. Chandran, A. Goel, "A randomized, pilot study to assess the efficacy and safety of curcumin in patients with active rheumatoid arthritis," *Phytotherapy Research: PTR*, November 2012, PubMed, National Center for Biotechnology Information, https://www.ncbi.nlm.nih.gov/pubmed/22407780.

 Sahdeo Prasad, Ph.D., Anaheim Marriott, Anaheim, CA, September 23, 2016.
K.Y. Chin, "The spice for joint inflammation: anti-inflammatory role of curcumin in treating osteoarthritis," *Drug design, development and therapy*, Pub Med, National Center for Biotechnology Information, September 20, 2016, https://www. ncbi.nlm.nih.gov/pubmed/27703331.

5. V. Kuptniratsaikul, S. Thanakhumtorn, P. Chinswangwatanakul, L. Wattanamongkonsil, V. Thamlikitkul, "Efficacy and safety of Curcuma domestica extracts in patients with knee osteoarthritis," *Journal of alternative and complementary medicine* (New York, N.Y.), PubMed, National Center for Biotechnology Information, August 2009, https://www.ncbi.nlm.nih.gov/pubmed/19678780.

6. A. B. Kunnumakkara, D. Bordoloi, G. Padmavathi, J. Monisha, N. K. Roy, S. Prasad, B. B. Aggarwal, "Curcumin, the golden nutraceutical: multitargeting for multiple chronic diseases," *British Journal of Pharmacology*, PubMed, National Center for Biotechnology Information, September 17, 2016, https://www.ncbi.nlm. nih.gov/pubmed/27638428.

INFLAMMATORY BOWEL DISEASE

Turmeric can even quench inflammatory fires in the gut. Researchers have described curcumin as a promising and safe medication for maintaining remission in patients with quiescent ulcerative colitis.

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Risë is a Registered Dietitian Nutritionist. Her understanding of how significantly diet and lifestyle impact one's health and happiness fuels her passion to help, educate, and inspire others.

IN CONCLUSION

One of the articles Prasad co-authored gave curcumin this