

Curcumin May be Viable Supplement to Treat Inflammatory Bowel Disease

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Pawel Kiela

(PhysOrg.com) -- Turmeric - the key ingredient in curry - has been used in India for thousands of years to help treat colds, inflammation, arthritis and even cancer.

Now, researchers at the Steele Children's Research Center at The University of Arizona have found that curcumin (the biologically active ingredient in turmeric) may be a viable supplement to treat [Inflammatory Bowel Disease](#), known as IBD.

Basically, they have shown that curcumin decreases the severe inflammation and resultant intestinal damage caused by IBD.

IBD refers to two [inflammatory diseases](#): Crohn's Disease, which affects the entire [gastrointestinal tract](#), and ulcerative colitis, which affects the colon. Both cause severe abdominal pain, diarrhea, vomiting, fatigue and weight loss.

As many as one in 500 individuals will be diagnosed with IBD each year, and IBD typically is diagnosed in children and young adults between the ages of 10 and 19. Approximately 1 million individuals in the United States suffer from IBD.

For several years, Steele Children's Research Center researchers have been investigating how curcumin aids in treating IBD.

Recently, Steele Center principal investigator Pawel Kiela, research associate professor, and co-investigator Dr. Faye K. Ghishan, MD, Steele Center director and professor, and their team made some new discoveries regarding how curcumin may be used as a supplemental treatment for IBD.

Kiela and Ghishan are faculty members at the UA College of Medicine.

Neutrophils (the most common type of [white blood cells](#)) play a vital role in the immune system, for they are the first immune cells to arrive at the site of inflammation and play a key role in recognizing and destroying the pathogens that cause inflammation and infection.

"However, for the patient suffering with IBD, the immune system is both friend and foe," said Kiela. "Under normal circumstances, neutrophils are indispensable for fighting infection and resolving the inflammation. But with IBD, there is an exaggerated and prolonged influx of neutrophils into the inflamed tissue. Paradoxically, then, the neutrophils end up damaging the lining of the intestines, making the inflammation even worse. In the end, this innate response designed to aid

in the fighting of pathogens ends up causing more harm than good."

Kiela and Ghishan and their team recently discovered that curcumin suppresses the migration of neutrophils to the site of [inflammation](#), thus minimizing the damage to the intestines.

"We have shown that curcumin not only inhibits the synthesis and secretion of molecules that would normally attract the massive influx of neutrophils to the site of injury, but it also suppresses the ability of neutrophils to respond to these substances and their directional migration," Kiela said.

Recent clinical trials have shown that relapses in [ulcerative colitis](#) patients who took daily curcumin supplement were half as frequent as in patients receiving a placebo.

"Although curcumin is unlikely to replace the current treatments for IBD, it can be considered a valuable supplemental therapy that may improve the quality of life in patients with chronic IBD," Kiela said.

Provided by University of Arizona ([news](#) : [web](#))

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