

Oxidized form of a common vitamin may bring relief for ulcerative colitis

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Here's another reason why you should take your vitamins. A new research report appearing in the October 2009 print issue of the *Journal of Leukocyte Biology* suggests that retinoic acid, the oxidized form of vitamin A, could be a beneficial treatment for people suffering from ulcerative colitis and other irritable bowel diseases. Specifically they found that retinoic acid helps suppress out-of-control inflammation, which is a hallmark of active ulcerative colitis.

"Pharmaceutical strategies based on this research may offer a promising alternative to our current approaches of managing immune diseases including, IBD, arthritis, multiple sclerosis, and so on," Aiping Bai, a researcher involved in the work from Nanchang University in Nanchang City, China.

To make this discovery, Bai and colleagues conducted in vitro studies with human tissue and in vivo studies in mice. Both studies ultimately found that treatment with retinoic acid reduced the inflammation in the colon by increasing the expression of FOXP3, a gene involved with [immune system](#) responses, as well as decreasing the expression of IL-17, a [cytokine](#) believed to cause inflammation. Because many experts believe that IL-17 directly relates to the uncontrolled inflammation seen in [ulcerative colitis](#) and irritable bowel disease, the discovery that retinoic acid reduces IL-17's ability to cause inflammation could accelerate the development of treatments for these chronic diseases.

"Runaway inflammation is serious problem, no matter where it occurs in

the body, but in many instances, the root cause is a mystery," said John Wherry, Ph.D., Deputy Editor of the [Journal of Leukocyte Biology](#). "This research helps scientists better understand what causes and controls inflammation in the colon, which in turn, helps lay the groundwork for new classes of drugs to treat this devastating condition."

More information: <http://www.jleukbio.org>

Source: Federation of American Societies for Experimental Biology
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