

CURCUMIN MCT

PHOTO

Clinical Applications

- Supports Healthy Immune Response
- Supports Cell Antioxidant and Protective Abilities
- Supports Neuronal Health
- Promotes Healthy Joints

SUPPLEMENTS FACTS

SERVING SIZE 1 capsule

Turmeric Extract / 95% Curcuminoids /	480mg
MCT oil powder	200mg
(MCT60/40 caprylic to capric acid)	
Nigella Sativa Extract / Cumin Seeds/	10mg
Piper Nigrum Extract / Black pepper 95% piperine/	3mg
Vitamin C	15 mg

CURCUMIN is a phenolic phytochemical extracted from turmeric/ Curcuma Longa/ an herb extensively used in Chinese and Auyrvedic herbology for variety of

complaints, with increasing use for its cell protecting and immunomodulatory properties.

Research has demonstrated that curcumin has antioxidant activity , it is an immune cell modulator and has inhibitory effect on COX-2 , iNOS enzymes , TNF-alfa , IL and NF-kB./ references 1,2 /

Various animal and human studies support its use in promoting health in joints, gastrointestinal mucosa, the eye's uveal tract, liver detoxification pathways.

Curcumin may support balanced immune response in cardiovascular, nervous, gastrointestinal , respiratory tissues. / References 1,2,8,9,10,11,12/

In animal studies curcumin promoted normal cell proliferation due to its ability to modulate certain types of cytokines/ like NF-kB transcription factor/, support detoxification, scavenge free radicals and to support induction of cell cycle arrest and apoptosis./Reference 2,3,16,17/

Previous observational studies in populations that consume large amounts of curry, as well as laboratory research on rodents , have strongly suggested that curcumin might be effective in preventing and/or treating cancer in the lower intestine

/reference 18/

Neurons are very susceptible to oxidative stress due to high demand for oxygen , high level of polyunsaturated fatty acids in neuronal membrane phospholipids and low antioxidant defenses.

New research supports protective effect on neurons, and positive effect on brain's amyloid plaques/ reference 4/

Curcumin has been used for supporting healthy gut flora balance /reference 1,2,6,7/

CUMIN

Cumin is a phytochemical extracted from Black seed /Nigella Sativa / which shows significant anti-inflammatory , anti-osteoporotic/ reference 3/ modulating and supporting immune regulation in preclinical trials /reference 5/

PIPERINE

Piperine is an extract from black pepper fruit, which is a potent enhancer of absorption .Curcumin extract is poorly absorbed from gastrointestinal tract Piperine increases the bioabsorption of curcumin by 2000%therefore increasing the amount of bioavailable curcumin in the blood.

At a dose of 2g curcumin alone serum levels were very low or undetectable in humans volunteers but addition of piperine produced much higher serum concentration from 0.25 one hour after administration of curcumin and piperine together. /reference 1/

MCT / Medium Chain Triglycerides / fraction from coconut oil/

MCT intake increases the serum level of ketone bodies, which are an alternative fuel for neurons / nerve cells in brain/ when brain is starving, because brain can not utilize glucose any more and glucose can not get into the cell, neurons are dying . Unfortunately this leads to impairment of neurological functioning like memory impairment, speech , movement control etc.

MCT intake improved memory in patients in clinical studies /ref 19, 20 /

REFERENCES

1. Jurenka JS, Anti-inflammatory properties of curcumin, a major constituent of Curcuma Longa; a review of preclinical and clinical research. *Altern Med Rev* 2009 June;14 (2);141-53 PMID 19594223
2. Jagetia GC, Aggarwal BB “Spicing up” of the immune system by curcumin. *J. Clin Immunol.* 2007 Jan;27 (1)19-35 PMID 17211725

3. Shuid AN, et al , Nigella sativa: A Potential Antiosteoporotic Agent, *Evid Based Complement Alternat Med* 2012; 2012 696230, PMID 22973403
4. Sun AY, Wang Q, Simonyi A et al, Botanical phenolics and brain health ,*Neuromolecular Med.* 2008 10(4); 259-74 PMID 19191039
5. Chehl N, Chipitsyna G, Gong Q, Yeo CJ , Arafat HA Department of Surgery Thomas Jefferson University, Philadelphia “ Anti-inflammatory effect of the Nigella sativa seed extract thymoquinone in pancreatic cancer PMID 19768141.
6. Neelofar,K, Shreaz S, Rimple B,et al Curcumin as a promising anticandidal of clinical interest *Can J Microbiol.* 2011 Mar 57(3) : 204-10 PMID 21358761
7. Martins CW, da Silva DL, Neres AT et, Curcumin as a promising antifungal of clinical interest. *J Antimicrob Chemother.* 2009 Feb; 63(2):337 -39 PMID 19038979.
8. Ukil A, Maity S , Karmakar S et al Curcumin the major component of food flavour turmeric, reduces mucosal injury in trinitrobenzene sulphonic acid induced colitis. *Br J Pharmacol.* 2003 May 139(2):209-18. PMID 12770926.
9. Epstein J, Docena G, McDonald TT,et al. Curcumin suppresses p38 mitogen-activated protein kinase activation, reduces IL-1 beta and matrix metalloproteinase-3 and enhances IL-10 in the mucosa of children and adults with inflammatory bowel disease. *Br J Nutr.*2010 March ;103 (6):824-32 PMID 19878610.
10. Funk JL, Oyarzo JN , Frye JB et al., Turmeric extract containing curcuminoids prevent experimental rheumatoid arthritis . *J Nat Prod.*2006 Mar;69(3) 351-55 PMID 16562833.
11. Holt PR, Katz S ,Kirshoff R. Curcumin therapy in inflammatory bowel disease: a pilot study. *Dig Dis Sci.* 2005 Nov;50(11):2191-93 PMID 16240238.
12. Lal B, Kapoor AK, Asthana OP, et al. Efficacy of curcumin in the management of chronic anterior uveitis . *Phytother Res* 1999 June 13(4) 318-22 PMID 10404539.
13. Dhillon N, Aggarwal BB, Newman RA ,et al . Phase II trial of curcumin in patients with advanced pancreatic cancer . *Clin Cancer Res.* 2008 Jul; 14(14) 4491-99. PMID 18628464
14. Xie L , Li XK, Takahara S, Curcumin has bright prospects for the treatment of multiple sclerosis. *Int Immunopharmacol.* 2011 Mar; 11(3);323-30 /20828641/
15. Mythri RB Harish G, Dubey SK ,et al. Glutamoyl diester of the dietary polyphenol curcumin offers improved protection against peroxynitrate-mediated nitrosative stress and damage of brain mitochondria in vitro: implications for Parkinson’s disease. *Mol Cell Biochem.* 2011 Jan ; 347(1-2)135-43. PMID 20972609.

16. Ravindran J, Prasad S, Aggarwal BB, Curcumin and cancer cells: how many ways can curry kill tumor cells selectively? *AAPS J* 2009 Sep; 11(3) :495-510
PMID 9619120.

17. Goel A Aggarwal BB. Curcumin , the golden spice from Indian saffron , is a chemoensitizer and radiosensitizer for tumors and chemoprotector and radioprotector for normal organs. *Nutr Cancer* 2010 Oct;62(7):919-30. PMID 20924967

18. In the study, published in the August issue of Clinical Gastroenterology and Hepatology, five patients with an inherited form of precancerous polyps in the lower bowel known as familial adenomatous polyposis, of FAP, were treated over an average of six months with regular doses of curcumin, the chemical found in turmeric, and quercetin, an antioxidant in onions. The average number of polyps dropped 60.4 percent, and the average size dropped by 50.9 percent, according to a team led by gastroenterologist Francis M. Giardiello, a professor at the School of Medicine, and Marcia Cruz-Correa, a visiting professor from the University of Puerto Rico School of Medicine. "We believe this is the first proof of principle that these substances have significant effects in patients with FAP," Giardiello said.

Familial adenomatous polyposis is a disorder that runs in families and is characterized by the development of hundreds of colorectal adenomas (polyps) and eventual colon cancer. Recently, nonsteroidal anti-inflammatory drugs, known as NSAIDs, have been used to treat some patients with this condition, but these compounds often produce significant side effects, including gastrointestinal ulcerations and bleeding.

19. Rebello CJ, Keller JN, Liu AG, Johnson WD , Greenway FL;
Pilot feasibility and safety study examining the effect of MCT supplementation in subjects with mild cognitive impairment .A randomized controlled trial
“ Intake of MCT oil increased serum ketone bodies and improved memory, while intake of placebo didn’t show any improvements in cognitive measures tested”
PMID 26675661

20 .Roger MA, Henderson ST, Hale C, Cholerton B, Baker LD, Watson GS, Hyde K, Chapman D, Craft S;
Effect of beta-hydroxybutyrate on cognition in memory-impaired adults
“ketone bodies are an effective alternative energy substrate for the brain.Elevation of plasma ketone bodies through oral dose of MCT (Medium Chain Tryglicerides) may improve cognitive functioning in older adults with memory disorders
PMID 15123336

CURCUMIN MCT