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Editorial Note

Curcumin Therapy's Efficacy in the Treatment of Inflammation and Cancer

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EDITORIAL NOTE

Despite the efforts of doctors and scientists in the past to reduce the occurrence of fatal diseases such as nervous system, circulatory system, and digestive tract disorders, cancer and infectious diseases have remained uncontrollable. Various medications based on a single target have been released in recent years, however these diseases are not the result of a single cause or factor; rather, several signalling pathways are recognised to be the cause of the diseases indicated above.

As a result, targeting a single pathway is ineffective, and medications that attack a single target are also unaffordable in terms of price and side effects. Hus, instead of treatments that attack a single target, As a result, targeting a single pathway is useless, and single-target drugs are prohibitive in terms of cost and side effects. Instead of single-targeted medicines, Hus uses a multi-targeted approach. it is advisable to go for safe, cost-eَوective, and readily available multi-target dietary components which gives protection from diseases as well as they are eَوective substances for treatment of such disorders. About two centuries ago, and found a nutritional component Curcumin from turmeric *(Curcuma longa).*

Curcumin (derived from turmeric) is a lipophilic substance that remains stable in the stomach's acidic pH but is water insoluble. Only a few studies have employed pure curcumin, but the majority have used commercial turmeric or a mixture of curcuminoids. Turmeric has been used in traditional Indian medicine to treat anorexia, hepatic problems, biliary disorders, sinusitis, and wound healing, inflammation and rheumatism.

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These findings pave the way for clinical investigations of its therapeutic effects. Since the discovery of Curcumin's possible therapeutic effects, it has become a focus of research in the field of human health, piqued experts' attention. A study found that a 5 percent sodium Curcumin solution stimulates early gall bladder filtration in people with biliary illness. . In addition, 67 cholecystitis patients were administered curcumin for three weeks, with one patient receiving a complete cure and few adverse effects. These trials also demonstrate its efficacy against a wide spectrum of human disorders, including malignancies and inflammatory diseases. How it is feasible for an agent to have several therapeutic and nutritional effects was found to be highly thoughtful for scientists and clinicians. Since there has been a lot of research done on it, it has been proven to play an important part in a variety of signalling pathways. Curcumin interacts with proinflammatory cytokines and other cell signalling molecules. apoptotic proteins, (COX)-2, NF-B, IKK, STAT3, malondialdehyde (MDA), endothelin-1, E2, (CRP), GST, GSH, VCAM1, phosphorylase kinase (PhK), pepsinogen, total cholesterol, transferrin receptor.

Curcumin research is occasionally done purely on Curcumin, while the rest is done using combinations of whole turmeric and aierwards. Curcumin has been declared safe by the FDA, and it is utilised as a supplementary nutrition in several nations. Curcumin can be found in capsules, pills, energy drinks, and cosmetics. Curcumin, which mediates several molecular pathways, is the subject of this review, which focuses on in-vitro and in-vivo clinical trials. It discusses potential health issues and difficulties associated with the use of curcumin in the treatment of disorders such as diabetes, obesity, cardiovascular and neurodegenerative diseases, cerebral edoema, allergies, arthritis, inflammatory bowel disease, renal ischemia, and others.

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