

Turmeric and its Health Benefits **Timothy Davis***

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Editorial

Turmeric is a rhizomatous Indian herbal plant (*Curcuma longa*) belonging to the ginger family (*Zingiberaceae*) with well-known medicinal properties. Turmeric's therapeutic properties can be ascribed to the presence of active components known as curcuminoids. Curcuminoids are a group of compounds that include curcumin, Demethoxycurcumin (DMC), and Bisdemethoxycurcumin (BDMC). Curcuminoids, which are yellow in colour, are extracted from the rhizomes of *Curcuma longa* L. (turmeric). Curcumin, a tiny molecular weight polyphenolic molecule that is lipophilic in nature and hence insoluble in water and ether but soluble in ethanol, dimethylsulfoxide, and other organic solvents, is one of the most fascinating components of curcuminoid. Curcumin is stable in the stomach's acidic pH. Other components include volatile oils such as tumerone, atlantone, and zingiberone, as well as carbohydrates, proteins, and resins. Curcumin, the key ingredient in turmeric, is extracted from the *Curcuma longa* plant and is responsible for its colour. A bioactive component of this nature has been widely researched. Curcumin is also known as diferuloylmethane (1, 7-bis (4-hydroxy-3-methoxyphenyl)-1, 6-heptadiene-3, 5- dione). It's a tautomeric molecule that exists in both enolic and keto forms in organic solvents and water. Turmeric is a plant with a long history of therapeutic use, reaching back to 4000 BC in India's Vedic culture, when it was employed as a culinary spice and had religious importance. Turmeric is made from rhizomes that have been boiled, dried, cleaned, and polished. The complete rhizomes are collected after harvesting. They resemble fingers with bulbs and splits that are 2 cm to 8 cm long and 1 cm to 2 cm wide. To make turmeric powder, the dried rhizomes are further treated and reprocessed. It is known by various names in various cultures and regions.

Turmeric has at least 53 different names in Sanskrit. Curcumin has long been utilised as a medicinal herb due to its several benefits, including antioxidant, anti-inflammatory, antimutagenic, antibacterial, and therapeutic characteristics. Curcumin has a low

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absorption rate, a fast metabolism, and a fast elimination rate. Several compounds have been developed to increase curcumin bioavailability. The most intriguing is piperine, which increases curcumin bioavailability by blocking the curcumin metabolic route. The bioavailability of curcumin is increased by 2000% when piperine is used. Curcumin is an important component in *Curcuma Longa* root extract. In Asian countries, the yellow root of this plant has been utilised as a flavouring and colouring agent for food and medicine because of the presence of curcumin. Curcumin comes in a variety of forms, including capsules, pills, and ointments.

Curcuminoids have been labelled "Generally Recognized as Safe" by the US Food and Drug Administration (FDA) (GRAS). The goal of this review is to provide a high-level summary of curcumin's possible health advantages. Turmeric is used in herbal and traditional medicine to treat rheumatoid arthritis, chronic anterior uveitis, conjunctivitis, skin cancer, smallpox, chickenpox, wound healing, urinary tract infections, and liver ailments, as well as to strengthen the overall energy of the body, dispel worms, regulate menstruation, dissolve gallstones, cleanse wounds, and even to treat various digestive disorders. *C. longa* contains more than 3% curcumin, 1.4% DMC, and 1.2% BDMC in its chemical composition. Curcumin also demonstrated a strong protective impact against bone density diseases such as osteopenia and osteoarthritis, as well as pain and swelling in the mouth, gingivitis, and periodontitis.