

# TURMERIC POWDER AND ITS BENEFITS

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**Abstract:** Curcumin is an excellent medicine for recovery of internal tissue injury. Curcumin is also useful for the treatment of nervous cell injury. It is anti carcinogenic reduces reproduction of ill cell. It repairs damage internal tissue. It has antiseptic, antibiotic and Pain relief character. It reduces melanin concentration and used as fairness cream. Turmeric power (Curcumin) boosts our immune system.

**IndexTerms - Internal tissue, anti carcinogenic, anti biotic, antiseptic.**

## 1. Introduction

Turmeric is an Indian rhizomatous herbal plant (*Curcuma longa*) of the ginger family (Zingiberaceae) of well-known medical benefits. The medicinal benefits of turmeric could be attributed to the presence of active principles called curcuminoids. One of the most interesting components of curcuminoid is curcumin, which is a small molecular weight polyphenolic compound and lipophilic in nature, hence insoluble in water and also in ether but soluble in ethanol, dimethylsulfoxide, and other organic solvents. Curcumin is stable at the acidic pH of the stomach. The other constituents present are volatile oils including tumerone, atlantone and zingiberone and sugars, proteins and resins. The active constituent of turmeric- curcumin is isolated from *curcuma longa* and it provides colour to turmeric. Curcumin (1, 7-bis (4-hydroxy-3-methoxyphenyl)-1, 6-heptadiene-3,5-dione) is also called diferuloylmethane. It is a tautomeric compound existing in enolic form in organic solvents and as a keto form in water.

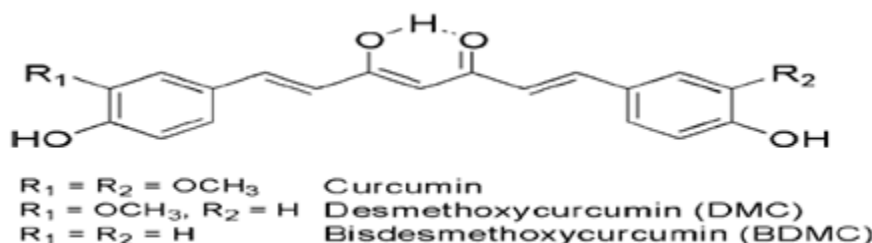


Fig 1

The bioactive polyphenol present in the turmeric is curcumin, which plays an important role in the anti-inflammatory, anti-oxidant, anti-carcinogenic, anti-invasive as a mediator of chemo resistance, radio resistance, chemopreventive agent, and as a therapeutic agent in wound healing, dyspepsia, diabetes and cardiovascular ailments, rheumatism, body ache, hepatic disorders, skin diseases, intestinal worms, constipation, diarrhoea, intermittent fevers, urinary discharges, inflammations, biliousness, leukoderma, amenorrhoea, and colic. Curcumin has the potential to treat a wide variety of inflammatory diseases including cancer, diabetes, cardiovascular diseases, arthritis, Alzheimer's disease and psoriasis through modulation of numerous molecular targets.<sup>9</sup> Considering wide range of pharmacological properties that curcumin offers, numerous studies have investigated its potency as a therapeutic agent in various diseases such as autoimmune, cardiovascular, neoplastic, pulmonary, neurodegenerative and metabolic diseases.<sup>1-9</sup>

The compound of turmeric contains carbohydrate (69.4%), protein (6.3%), fat (5.1%), mineral (3.5%), and moisture (13.1%). Curcuminoids consist of curcumin (77%), demethoxycurcumin (DMC; 17%), and bidemethoxycurcumin (BDMC; 3%). It is stated that curcumin is sensitive to light and, therefore, it is recommended that biological samples containing curcumin are to be protected from light.<sup>10-11</sup>

It has been proven that curcumin is a highly pleiotropic molecule which can be a modulator of intracellular signalling pathways that control cell growth, inflammation, and apoptosis. Curcumin might be a potential candidate for the prevention and/or treatment of some diseases due to its anti-oxidant, anti-inflammatory activities and an excellent safety profile.<sup>12</sup>

Influenza A viruses are zoonotic pathogens that continuously circulate and change in several animal hosts, including birds, pigs, horses and humans. The emergence of novel virus strains that are capable of causing human epidemics or pandemics is a serious possibility.<sup>13</sup>

Numerous studies have investigated curcumin's potency as a therapeutic agent in various diseases such as autoimmune, cardiovascular, neoplastic, pulmonary, neurodegenerative and metabolic diseases. With regard to its wide array of health benefits and published data on the underlying mechanisms of its action, a complex interaction between three main events including inflammation, oxidative stress, and immunity, seems to contribute to different therapeutic roles of this compound.<sup>14</sup>

The immune system is an efficient integrated network of cellular elements and chemicals developed to preserve the integrity of the organism against external insults and its correct functioning and balance are essential to avoid the occurrence of a great variety of disorders. To date, evidence from literature highlights an increase in immunological diseases and a great attention has been focused on the development of molecules able to modulate the immune response. There is an enormous global demand for new effective therapies and researchers are investigating new fields. One promising strategy is the use of herbal medicines as integrative, complementary and preventive therapy. The active components in medical plants have always been an important source of clinical therapeutics and the study of their molecular pharmacology is an enormous challenge since they offer a great chemical diversity with often multi-pharmacological activity.<sup>15</sup>

Turmeric has been found to have some efficacies in repairing the skin texture including its ability to enlighten the color of the skin associated to premature skin aging. Study has been done to find significant differences between twice applications of 0.25% turmeric cream extract and 4% Hq at day 8 (2.30) on skin changes (pigment).<sup>16</sup>

The use of hot Tumeric paste for treatment of musculoskeletal injuries is a home remedy commonly used in Oman. This practice occasionally leads to skin burns complicating an already injured extremity.<sup>17</sup>

Turmeric is a commonly used oral herbal supplement with purported anti-inflammatory and antineoplastic properties. It is promoted as safe, with limited reports of severe adverse effects directly related to oral turmeric thus far in the literature.<sup>18</sup>

Wound healing is a complex process of recovering the forms and functions of injured tissues. The process is tightly regulated by multiple growth factors and cytokines released at the wound site. Any alterations that disrupt the healing processes would worsen the tissue damage and prolong repair process. Various conditions may contribute to impaired wound healing, including infections, underlying diseases and medications. Numerous studies on the potential of natural products with anti-inflammatory, antioxidant, antibacterial and pro-collagen synthesis properties as wound healing agents have been performed. Their medicinal properties can be contributed by the content of bioactive phytochemical constituents such as alkaloids, essential oils, flavonoids, tannins, saponins, and phenolic compounds in the natural products.<sup>19</sup>

Curcumin, the phytochemical component in turmeric, is used as a dietary spice and a topical ointment for the treatment of inflammation in India for centuries. Based on a number of clinical studies in carcinogenesis, a daily oral dose of 3.6 g curcumin has been efficacious for colorectal cancer and advocates its advancement into Phase II clinical studies. In addition to the anticancer effects, curcumin has been effective against a variety of disease conditions in both in vitro and in vivo preclinical studies.<sup>20</sup>

## 2. CONCLUSION

Curcumin is an excellent medicine for recovery of internal tissue injury. Curcumin is also useful for the treatment of nervous cell injury. It is anti carcinogenic reduces reproduction of ill cell. It repairs damage internal soft tissue. It has antiseptic character if it is uses with ghee for outer wound and cut. It has antibiotic and Pain relief character if it is uses with hot milk. It reduces melanin concentration and used as fairness cream and product. Uses of turmeric power (Curcumin) with hot milk boost our immune system.

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