

# Turmeric: The Golden Spice of India

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**Abstract:** *Turmeric is an ancient spice derived from the rhizomes of *Curcuma longa*, which is a member of the ginger family (Zingiberaceae). Also known as 'Golden Spice of India' turmeric has been used in India for medicinal purposes for centuries. It has been used in traditional medicine as a household remedy for various diseases, including biliary disorders, anorexia, cough, diabetic wounds, hepatic disorders, rheumatism and sinusitis. In addition to its use as a spice and pigment, turmeric and its constituents mainly curcumin and essential oils shows a wide spectrum of biological actions. These include its anti-inflammatory, antioxidant, anti-carcinogenic, antifertility, anti-diabetic, antibacterial, antifungal, antiprotozoal, antiviral, anti-fibrotic, anti-venom, antiulcer, hypotensive and hypo cholesterol activities. Modern interest on turmeric started in 1970's when researchers found that the herb may possess anti-inflammatory and antioxidant properties. Safety evaluation studies indicate that both turmeric and curcumin are well tolerated at a very high dose without any toxic effects. Thus, turmeric and its constituents have the potential for the development of modern medicine for the treatment of various diseases. Given original research work contain Botanical name, Family of Plant, Morphological information, Chemical constituent of Turmeric and its basic mode of application. The motive behind the work is to make community aware about the importance of herb.*

**Keywords:** Turmeric, Zingiberaceae, Rheumatism, Antifertility

## 1. Introduction

*Curcuma longa*, widely known as Turmeric is a perennial herb and Member of the Zingiberaceae (ginger) family. It is cultivated extensively in Asian countries like India, Thailand and China. The rhizome, the portion of the plant used medicinally which yield a yellow powder. Dried *Curcuma longa* is the source of turmeric. Turmeric has various useful properties with antioxidant activities and is useful in conditions such as inflammation, ulcer and cancer. It also has antifungal, antimicrobial renal and hepatoprotective activities. Therefore, it has the potential against various cancer, diabetes, allergies, arthritis, Alzheimer's disease and other chronic and hard curable diseases. The purpose of this research work was to provide a brief summary of the new and current knowledge of the effects of curcumin which is a part of our day to day food. Turmeric, a spice that has long been recognized for its medicinal properties, has received interest from both the medical/scientific world and from culinary enthusiasts, as it is the major source of the polyphenol curcumin [1, 5]. As the global scenario is now changing towards the use of non-toxic plant products having traditional medicinal use, development of modern drugs from turmeric should be emphasized for the control of various diseases. Recent years have seen an increased enthusiasm in treating various diseases with natural products. Curcumin is considered as a non-toxic, highly promising natural antioxidant compound having a wide spectrum of biological functions. It is expected that curcumin may find application as a novel drug in the near future to control various diseases. In Ayurveda medicine since ancient times turmeric is used with various biological applications. Although some work need to be done on the possible medicinal applications. Current research paper try to collect maximum information about application of Turmeric from local tribes, different communities of Gandhinagar district (Study area), and Ayurveda practitioners.

## 2. Methodology

Systematically selected informants including traditional herbalists (key informants) were participated in this study. Semi-structured interviews, discussions and guided field walk constituted the data collection methods. Medicinal application of turmeric and its relevant information were gathered and summarized. Various indices were also used to evaluate the ethno medicinal data. Furthermore, the present findings were compared with previous reports to assess data novelty. Finally with all the collected data was segregated according to its medicinal use for particular diseases with its relevant application. For more authenticity the collected information were also checked with different online publications, research papers, old literature, magazines, and different publication sites (Singh V., 2013).

## 3. Observations

*Curcuma longa* spice is a flowering plant belongs to Zingiberaceae Family. The rhizoid of Turmeric is used as spice. The plant is a perennial, rhizomatous, herbaceous. Its native from the Indian subcontinent and Southeast Asia that requires temperatures between 20 and 30 °C.

The common conclusions after interviewing the community are as follow.

1. It is a natural antiseptic and antibacterial agent, useful in disinfecting cuts and burns.
2. When combined with cauliflower, it has shown to prevent prostate cancer and stop the growth of existing prostate cancer.
3. Reduces the risk of childhood leukemia.
4. Is a natural liver detoxifier.
5. May prevent metastases from occurring in many different forms of cancer.

6. It is a potent natural anti-inflammatory that works as well as many anti-inflammatory drugs but without the side effects.
7. Because of its anti-inflammatory properties, it is a natural treatment for arthritis and rheumatoid arthritis.
8. Speeds up wound healing and assist in remodeling of damaged skin.
9. May help in the treatment of psoriasis and other inflammatory skin conditions.

Except this Turmeric is very commonly used in many more treatment as given in Table 1.

**Table 1**

Diseases	Treatment
Anemia	Turmeric Juice mixed with honey is taken in
Worms	Fresh turmeric juice mixed with pinch of salt taken empty stomach in morning for few days.
Bone fracture	Apply paste made up of turmeric powder and Mango leaves.
Ulcer	Cold milk with Turmeric powder [9].
Asthma	Make a paste of Turmeric powder with curry leaves use as oral application.
Skin problem/Fungal Infection	Powder paste with curd and can add gram flour. Apply the paste on infected portion [10].
Diabetes	Drink a juice of fresh turmeric rhizoid every day. In some application they add gooseberry juice along with it.
Elephantiasis	Mixture of Turmeric + Jiggery + Cow's urine orally till get relive.
Jaundice/ Liver problem	Mixture of Terminalia arjuna, Turmeric powder and lemon juice paste is taken orally.
Boils	Application of turmeric powder with water on affected part.
Sprains	Ash obtained by burning dry turmeric in hot water is used.
Viral infection	Hot milk with dry turmeric powder.
Tooth ach	Make a ball of Turmeric powder with Lime and put it on pain region.
Pain in breast	Rinse mouth or drink Turmeric water by adding one spoon of honey [11].
Urinary Infection	Drinking Lime water with Turmeric powder, 3 times in a day can discharge the puss from urine.
Cancer	Drinking of Turmeric powder with hot milk before sleep can slow down the carcinogenic activity in body [12].

Most of the data were common which are having high health benefits by using turmeric in daily life.

#### 4. Review of Literature

*Curcuma longa*, widely known as turmeric is a perennial herb and Member of the Zingiberaceae (ginger) family. It is cultivated extensively in Asia countries like India, Thailand and China. The rhizome, the portion of the plant used medicinally which yield a yellow powder. Dried *Curcuma longa* is the source of turmeric. The ingredient that gives curry powder its characteristic yellow colour [1] Turmeric has various useful properties with antioxidant activities and is useful in conditions such as inflammation, ulcer and cancer [2]. It also has antifungal, antimicrobial renal and

hepatoprotective activities. Therefore, it has the potential against various cancers, diabetes, allergies, arthritis, Alzheimer's disease and other chronic and hard curable diseases [3]. Despite the lower bioavailability, therapeutic efficacy of curcumin against various human diseases, including cancer, cardiovascular diseases, diabetes, arthritis, neurological diseases and Crohn's disease, has been documented [4]. By modulating the activation of various transcription factors, curcumin regulates the expression of inflammatory enzymes, cytokines, adhesion molecules, and cell survival proteins which help in much metabolic activity in body to improve immune system for specific diseases [5]. Extensive research within the past two decades has shown that curcumin mediates its anti-inflammatory effects through the downregulation of inflammatory transcription factors (such as nuclear factor kappaB), enzymes (such as cyclooxygenase 2 and 5 lipoxygenase) and cytokines (such as tumour necrosis factor, interleukin 1 and interleukin 6) many Pharmacological research agencies are working on this [6]. The anti-inflammatory effects of curcumin were evaluated relative to various chronic inflammatory diseases. Based on the available pharmacological data obtained from in vitro and in vivo research, as well as clinical trials, an opportunity exists to translate curcumin into clinics for the prevention of inflammatory diseases in the near future [7]. Curcumin has been shown to exhibit antioxidant, anti-inflammatory, antiviral, antibacterial, antifungal, and anticancer activities and thus has a potential against various malignant diseases, diabetes, allergies, arthritis, Alzheimer's disease, and other chronic illnesses [8]. a spice originally common in the kitchen is now exhibiting activities in the clinic. In this review, we discuss the chemical constituents of turmeric, its biological activities, its molecular targets, and its potential in the clinic [9]. Turmeric has a long tradition of use in the Chinese and Ayurvedic systems of medicine, particularly as an anti-inflammatory agent, and for the treatment of flatulence, jaundice, menstrual difficulties, hematuria, hemorrhage, and colic [10].

#### 5. Conclusion

Curcumin has received worldwide attention for its multiple health benefits, which appear to act primarily through its anti-oxidant and anti-inflammatory mechanisms. These benefits are best achieved when curcumin is combined with different agents such as milk, honey, curd etc. which increase its bioavailability significantly. Research suggests that curcumin can help in the management of many metabolic syndrome. It may also help in the management of exercise-induced inflammation and muscle soreness, thus enhancing recovery and subsequent performance in active people. In addition, a relatively low dose can provide health benefits for people who have not diagnosed for any health disorder. It is expected that curcumin may find application as a novel drug in the near future to control various diseases. Turmeric is one of the thousands of important medicinal plants which is used traditionally throughout the world. The pharmacological effects (activities) reported from various sources prove that *Curcuma longa* has much more healing potential than any other herb drug. This is due to the existence of important chemical compounds in the plant. The pharmacological properties confirmed that Turmeric

possesses most important capability for the improvement of novel potent drugs in future.

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